

INDEX OF EXHIBITS

EXHIBIT	Title/Description
1	Plaintiff's Notice of Intent to Sue Letter (February 22, 2019)
2	USPS Certified Mail Return Receipts and Delivery Confirmation for NOI
3	Excerpted pages from U.S. EPA, Clean Air Act Stationary Source Civil Penalty Policy (October 25, 1991)
4	Excerpted pages from U.S. EPA, Clean Air Act National Stack Testing Guidance (April 27, 2009)
5	Excerpted pages from Indiana Department of Environmental Management, Stack Test Guide (last revised August 1, 2018)
6	Excerpted pages from Whiting Refinery Air Emission Statements for 2016-2018
7	Excerpted pages from October 8-12, 2018 Performance Test Reports for Boilers 31, 32, 33, and 34, and corresponding IDEM OAQ Compliance Memorandum (January 10, 2019)
8	Enforcement Referral Letter from Rick Massoels, IDEM Deputy Director of Northwest Regional Office, to Linda Wilson, BP Products North America, Inc. (April 8, 2016)
9	Excerpted pages from October 20, 2015 Performance Test Report for Boiler 32 & corresponding IDEM OAQ Compliance Memorandum (July 25, 2016)
10	Excerpted pages from January 28, 2016 Performance Test Report for Boiler 32 & corresponding IDEM OAQ Compliance Memorandum (June 1, 2016).
11	Excerpted pages from November 1-3, 2016 Performance Test Reports for Boilers 32 and 36, and corresponding IDEM OAQ Compliance Memorandum (September 18, 2017)
12	Excerpted pages from October 10, 2017 Performance Test Report for Boiler 32 & corresponding IDEM OAQ Compliance Memorandum (March 23, 2018)
13	Excerpted pages from October 21, 2015 Performance Test Report for Boiler 36 & corresponding IDEM OAQ Compliance Memorandum (July 25, 2016)
14	Excerpted pages from April 16, 2019 Performance Test Report for Boiler 36

EXHIBIT 1



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Via Certified Mail, Return Receipt Requested

February 22, 2019

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RE: Notice of Intent to Sue for Violations of the Clean Air Act at the BP Whiting No. 3 Stanolind Power Station Boilers 31, 32, 33, 34, 36, Duct Burners, and Select Catalytic Reduction systems in Whiting, Lake County, Indiana.

Dear Sirs or Madams:

Pursuant to 42 U.S.C. § 7604(b) of the Clean Air Act, the Environmental Integrity Project (“EIP”) is writing in their individual capacity and on behalf of the Sierra Club (collectively, “Citizens”), to provide you with notice of our intent to file suit against BP Products North America, Inc. (“BP”) to enforce against past, current, and ongoing violations of the Clean Air Act, 42 U.S.C. § 7401 *et seq.*, at BP’s No. 3 Stanolind Power Station Boilers 31, 32, 33, 34, and 36, as well as their associated duct burners and Select Catalytic Reduction systems, located at the BP Whiting Refinery at 2815 Indianapolis Boulevard, in the City of Whiting, Lake County, Indiana 46394. Citizens request the opportunity to meet with you within 45 days to discuss resolution of the matters raised in this Clean Air Act notice letter.

I. BACKGROUND

No. 3 Stanolind Power Station (“3SPS”), also identified as Unit ID 503, contains five

individual boilers, all of which burn refinery gas, natural gas, or liquefied petroleum gas. Boilers 31 and 32 were originally installed in 1948, Boilers 33 and 34 were installed in 1951, and Boiler 36 was installed in 1953 (collectively, the “3SPS Boilers”). Each Boiler is rated at a maximum heat input capacity of 575 MMBtu/hour.

All five 3SPS Boilers were modified in 2008 as a contemporary project to the Whiting Refinery Modernization Project (“WRMP”), a significant expansion of the Whiting Refinery that allowed it to process heavy crude oil from the Canadian tar sands. *See* Whiting Refinery Title V Part 70 Permit, No. T 089-38868-00453 (January 29, 2018) Section D.24.4(x) (“Emissions Unit Description”). Each of the 3SPS Boilers is equipped with a conventional burner and a Select Catalytic Reduction (“SCR”) system. From 2010 to 2011, each 3SPS Boiler was also modified to install a direct-fired duct burner, each rated at 41 mmBTU/hr, equipped with low-NO_x burners, and controlled by the SCR system. Each 3SPS Boiler, its associated Duct Burner, and SCR system are collectively referred to as Stacks 503-01 through 503-05, respectively.¹

The violations identified below significantly increase emissions of particulate matter (“PM”), including inhalable particles that are 10 micrograms or less in diameter (“PM₁₀”). Extensive, peer-reviewed studies have demonstrated that human exposure to PM has well-documented links to serious health risks, such as a wide array of respiratory issues, heart attacks and irregular heartbeat, aggravated asthma, and premature death in individuals with heart or lung disease. Because particle size is directly related to their potential for causing health problems, fine particles less than 10 micrometers in diameter like PM₁₀ pose the greatest risks due to their ability to penetrate deep into the lungs and enter the bloodstream. EPA has not identified any “safe” level of exposure to particulates, and health risks increase in proportion to increases in fine particle pollution.

II. APPLICABLE CLEAN AIR ACT REQUIREMENTS

The Whiting Refinery is subject to applicable provisions of the Indiana State Implementation Plan (“SIP”), which is a set of state laws and regulations designed to protect air quality in Indiana and, more specifically, to achieve compliance with federally promulgated national ambient air quality standards (“NAAQS”). SIPs are required by Section 110 of the Clean Air Act (“CAA”), 42 U.S.C. § 7410, and must be approved by the U. S. Environmental Protection Agency (“EPA”).

SIPs additionally require sources to obtain CAA permits for project construction or modification. Once issued, the requirements of such permits are federally enforceable. Sources must also obtain and periodically renew operating permits under Title V of the CAA, which incorporate all applicable requirements, including federally enforceable permits for construction or modification issued by a State pursuant to its SIP. *See generally* 326 IAC 2-1.1-2 *et seq.*

¹ *See* Significant Permit Modification, No. SSM 089-36656-00453 (issued June 14, 2016), Section D.24.4(b)(2). IDEM did not start using the terms Stacks 503-01 through Stack 503-05 to refer to each 3SPS Boiler, its associated Duct Burner, and SCR system collectively, until this 2016 permit revision. As these designations are merely terms of art and do not affect any of BP’s actual obligations under its Title V permit, for the purpose of simplicity the remainder of this notice letter will use Stacks 503-01 through 503-05 when referring to each collective 3SPS Boiler, associated Duct Burner, and SCR system (respectively) in the context of violations of the applicable 0.010 lb/mmBtu PM₁₀ emissions limitation (including for violations preceding the 2016 permit).

Violations of emission limits and other requirements enumerated in Title V permits or specified in the SIP are independently enforceable under federal law. *See* 326 IAC 2-2-1(v).² Here, BP's federally enforceable Title V permits and Indiana's SIP impose two specific limits on the emissions of PM₁₀ applicable to each 3SPS Boiler and its associated Duct Burner and SCR system.

The Indiana SIP includes provisions that limit PM₁₀ emissions from each of the five 3SPS Boiler stacks at Whiting Refinery to no more than 0.0075 lb/mmBtu and 4.28 lb/hour. 326 IAC 6.8-2-6(a). These PM₁₀ emissions limitations apply separately to each stack serving³ the 3SPS Boilers and are specific to the Boilers – they do not apply to the Duct Burners or collateral emissions associated with SCR. 326 IAC 6.8-2-6(d) makes clear that these PM₁₀ emissions limitations include **both** filterable and condensable PM₁₀ emissions. *Id.* (stating that the emission limits in subsection (a) “apply to the sum of the filterable (front half) and condensible (back half) [sic] particulate matter.”). These SIP provisions were approved by EPA in 2008 pursuant to 40 C.F.R. Part 52, Subpart P, and became effective on May 30, 2008.⁴

These SIP PM₁₀ emissions limitations have also been explicitly incorporated as requirements of BP's federally enforceable Title V, Part 70 Operating Permit for the BP Whiting Refinery issued by the Indiana Department of Environmental Management (“IDEM”). As the Indiana SIP itself recognizes, any requirements or emissions limitations established in a Title V operating permit are also federally enforceable, regardless of whether such limits are included in the SIP. . 326 IAC 2-2-1(v)(1)-(3); *see also* 326 IAC 2-1.1-4(a) (“Federal provisions”) (stating that “[n]othing in this article shall allow for the circumvention or violation of any federal law or regulation[.]”).

Finally, States are also authorized, through their SIPs, to impose additional emissions limitations on individual sources pursuant to the CAA's Prevention of Significant Deterioration (“PSD”) and Nonattainment New Source Review (“NSR”) programs. *See generally* 326 IAC 2-1.1-4, 2-2 and 2-3 (Indiana SIP provisions implementing PSD and NSR). States determine the specific emissions limitations applicable under these programs, the limits themselves are federally enforceable requirements. Pursuant to this authority, IDEM established an additional PM₁₀ emissions limitation for Whiting Refinery in its Title V operating permit, which limits the **combined** PM₁₀ emissions from each 3SPS Boiler stack, its associated Duct Burner, and collateral SCR emissions, to 0.010 lb/mmBtu. *See* Whiting Refinery Title V Part 70 Permit, No. T 089-38868-00453 (January 29, 2018) (“2018 Title V Permit”), Section D.24.4(b)(2). This

² 326 IAC 2-2-1(v) states that federally enforceable limitations and conditions include all of the following: (1) requirements developed pursuant to 40 CFR Part 60 and 40 CFR Part 61; (2) requirements within the Indiana SIP; and (3) any permit requirements established pursuant to 40 CFR Part 52.21 or 40 CFR Part 51, Subpart I, “including operating permits issued under an EPA-approved program that is incorporated into the SIP and expressly requires adherence to any permit issued under the program.”

³ 326 IAC 6.8-2-2(2) clarifies that when an emissions limitation applies to “each stack serving” a facility/facilities, that said emissions limitation applies to each individual stack of the multiple stacks serving the facility/facilities.

⁴ *See* U.S. EPA. Final Rule: Approval and Promulgation of Air Quality Implementation Plans; Indiana; Revisions to Particulate Matter Rules. 73 Fed. Reg. 23356 (April 30, 2008). The Final Rule also states that the test methods BP must use to demonstrate compliance “are designed to capture both the filterable and condens[a]ble PM fractions.” *Id.* at 23357.

PM₁₀ emissions limitation also explicitly includes both filterable and condensable PM₁₀. *Id.* at Section D.24.11(b).

A. The 2012, 2015, 2016, and 2018 Title V Operating Permits

As stated above, BP's PM₁₀ emissions limitations are explicitly incorporated as enforceable requirements in the Title V, Part 70 Operating Permit for BP's Whiting Refinery issued by IDEM. While Whiting Refinery's Title V permit has been subject to numerous modifications and renewals over the past decade, four are directly relevant here: Permit No. SSM 089-32033-00453 (issued December 3, 2012); Permit No. T 089-30396-00453 (issued December 8, 2014); Permit No. SSM 089-36656-00453 (issued June 14, 2016); and Permit No. T 089-38868-00453 (issued January 29, 2018). Each permit is described briefly below, and Table 1 provides a summary of each and its applicable PM₁₀ requirements.

On December 3, 2012, BP was issued a Significant Source Modification Permit No. SSM 089-32033-00453 ("2012 Title V Permit"), which established several new requirements for direct-fired Duct Burners 31, 32, 33, 34, and 36, which had recently been installed at 3SPS. In relevant part, Section D.24.1.1 limited PM₁₀ emissions (filterable and condensable) from each 3SPS Boiler to 0.0075 lb/mmBtu and 4.28 lb/hour. Further, Section D.24.4(b)(3) limited PM₁₀ emissions from Stacks 503-01 through 503-05⁵ to 0.010 lb/mmBtu.

On December 8, 2014, BP was issued Part 70 Operating Permit Renewal, No. T 089-30396-00453, which became effective on January 1, 2015 ("2015 Title V Permit"). The 2015 Title V Permit retained both PM₁₀ emissions limits unchanged from the 2012 Title V Permit, in the same corresponding sections.

On June 14, 2016, BP was issued Significant Permit Modification, No. SSM 089-36656-00453 ("2016 Title V Permit"). As noted previously, while the 2016 Title V Permit revised the language of Section D.24.4(b) to clarify its original intent (and re-numbered some provisions), it did not modify either PM₁₀ emissions limit or any obligations relating to these limits.

On January 29, 2018, BP was issued Significant Permit Modification, No. T 089-38868-00453 ("2018 Title V Permit") for the 2015 Title V Permit. The 2018 Title V Permit retained both PM₁₀ emissions limits unchanged from the 2016 Title V Permit, in the same corresponding sections. However, it included a new Section D.24.11(b), which imposed additional compliance testing requirements for PM and PM₁₀ at the 3SPS Boilers and Stacks 503-01 through 503-05.

⁵ Section D.24.4(b), as originally drafted in the 2012 Title V Permit, was poorly worded and left some ambiguity as to whether the 0.010 lb/mmBtu limit was also intended to apply to emissions from the 3SPS Duct Burners. IDEM rectified this language in Permit No. SSM 089-36656-00453 (June 14, 2016) to explicitly clarify the provision's original intent that the 0.010 lb/mmBtu limit applies to all combined emissions from Stacks 503-01 through 503-05. *See* IDEM, Technical Support Document for SSM 089-36656-00453 at page 24.

Table 1
Permits and Associated PM₁₀ Limits

Permit	2012 Permit	2015 Permit	2016 Permit	2018 Permit
Dates Applicable	12/3/2012 – 12/31/2014	1/1/2015 – 6/14/2016	6/14/2016 – 1/29/2018	1/29/2018 - Present
PM ₁₀ Limit (3SPS Boilers Only)	0.0075 lb/mmBtu 4.28 lb/hour <i>See D.24.1.1</i>	0.0075 lb/mmBtu 4.28 lb/hour <i>See D.24.1</i>	0.0075 lb/mmBtu 4.28 lb/hour <i>See D.24.1</i>	0.0075 lb/mmBtu 4.28 lb/hour <i>See D.24.1</i>
PM ₁₀ Limit (Stacks 503-01 through 503-05)	0.010 lb/mmBtu <i>See D.24.4(b)(3)</i>	0.010 lb/mmBtu <i>See D.24.4(b)(3)</i>	0.010 lb/mmBtu <i>See D.24.4(b)(2)</i>	0.010 lb/mmBtu <i>See D.24.4(b)(2)</i>

B. Requirements for Demonstrating Compliance

Upon a failed stack test, BP is out of compliance with its PM₁₀ emissions limitations until it successfully demonstrates compliance. Indiana’s SIP imposes clear requirements for demonstrating compliance with the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations specifically applicable to each 3SPS Boiler at Whiting Refinery through periodic stack testing “in accordance with the procedures set forth in 40 CFR 60, Appendix A, Methods 1-5*, or other procedures approved by the commissioner and U.S. EPA.” *See* 326 IAC 6.8-1-3. This provision also explicitly incorporates “*40 CFR 60, Appendix A, Methods 1-5” by reference into the Indiana SIP. The SIP also states that total quantities of PM emissions at Whiting Refinery “shall be determined in accordance with” 40 CFR 51, Appendix M, Method 201A, 40 CFR 51, Appendix M, Method 202A, or 40 CFR 60, Appendix A, Method 5, and that alternatives to these methods may only be used “if they are approved in writing by U.S. EPA prior to the test.” 326 IAC 6.8-2-6(d).

EPA’s longstanding interpretation of the CAA is that “the CAA requires continuous compliance with emissions limits[.]” *See* U.S. EPA, Clean Air Act National Stack Testing Guidance (April 27, 2009)⁶ at 14 (citing 42 U.S.C. § 7602(k)). In order to ensure sources comply with their emissions limitations “without interruption,” the CAA authorizes penalties for multiple days of continuing violations, and establishes a presumption that violations are continuous until the source proves that it is in compliance. *Id.* (citing 42 U.S.C. § 7413(e)). Consequently, on a failed stack test, violations are “assumed to be continuous from the first provable date of violation until the source demonstrates compliance.” *See* U.S. EPA, Clean Air Act Stationary

⁶ EPA’s 2009 Stack Testing Guidance applies to “[a]ny performance testing conducted for the purposes of determining and demonstrating compliance with the applicable standards of 40 CFR Parts 60, 61, and 63 using promulgated test methods, other test methods or procedures cited in the applicable subpart(s), or alternative test methods approved by the Administrator under §§ 60.8, 61.13, or 63.7.” *See* 2009 Guidance at page 3.

BP is explicitly required by the Indiana SIP to determine compliance with its SIP PM₁₀ emissions limitations using the applicable standards of 40 CFR Part 60, Appendix A, Methods 1-5. 326 IAC 6.8-1-3; 326 IAC 6.8-2-6(d). Therefore, EPA’s 2009 Stack Test Guidance is applicable here.

Source Civil Penalty Policy (October 25, 1991) at 11-12; *see also* 42 U.S.C. § 7413(e).

Section D.24.11(b) of the 2018 Title V Permit states that in order to demonstrate compliance with Condition D.24.4, BP “shall perform PM and PM₁₀ testing” of each Stack 503-01 through 503-05 “at least once every 5.0 years from the date of the most recent valid compliance demonstration.” Section D.24.11(b) further provides that all “[t]esting shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures),” which incorporates federal testing standards at Subpart 60, and notes that Section C of the Permit “contains the Permittee’s obligation with regard to the performance testing required by this condition.”

Section C.19 of the 2018 Title V Permit, entitled “Actions Related to Noncompliance Demonstrated by a Stack Test,” states that when “the results of a stack test... exceed the level specified in any condition of this permit,” BP “shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test,” and perform a retest to demonstrate compliance “no later than one hundred eighty (180) days after the date of the test.” BP remains in continuing violation of this performance testing requirement until it successfully performs the required retest (which does not need to successfully demonstrate compliance for the purposes of this specific testing requirement).

III. VIOLATIONS OF THE CLEAN AIR ACT

As discussed further below, BP’s available stack test reports show that BP has exceeded both the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler and the 0.010 lb/mmBtu PM₁₀ emissions limitations applicable to each Stack 503-01 through 503-05 on multiple occasions, in violation of the requirements of Indiana’s SIP, BP’s Title V Operating Permit for the Whiting Refinery, and 42 U.S.C. § 7661a(a). The information presented below is sufficient to enable BP to ascertain the nature of each alleged violation, and when and where it occurred.

The information below encompasses **all** stack tests for 3SPS, from the years 2012 to present, that Citizens have been able to obtain through IDEM’s website, Virtual File Cabinet, and other publicly available records. With the sole exception of the Boiler 32 Test on October 10, 2017, all stack test results show that BP has failed to meet its applicable PM₁₀ emissions limitations at the 3SPS Boilers or Stacks 503-01 through 503-05. Consequently, per the requirements of Indiana’s SIP, BP’s Title V permits, and relevant EPA guidance, with the exception of the brief period of compliance following the October 10, 2017 test, **all** of the following violations alleged have been continuous from the first provable date of violation, are currently ongoing, and continuing for each day until BP successfully demonstrates compliance with the applicable limits in accordance with the procedures set forth in 40 CFR 60, Appendix A, Methods 1-5 and 326 IAC 3-6.

The results of these stack tests are summarized in Table 2 below. Text in red indicates a violation of an applicable PM₁₀ emissions limitation.

**Table 2 –
2015-2018 Stack Test Results for 3SPS Boilers and Stacks 503-01 through 503-05**

Test Date(s)	Unit(s) ⁷	Filterable lb/mmBtu	Condensable lb/mmBtu	Total lb/mmBtu	Filterable lb/hour	Condensable lb/hour	Total lb/hour
8/3/2015 ⁸	Boiler 32 and Stack	-	-	0.0171	-	-	10.33
8/5/2015 ⁹	Boiler 36 and Stack	-	-	0.0151	-	-	9.42
10/20/2015	Boiler 32 and Stack	0.00653	-	0.0177	0.365	9.572	9.937
10/21/2015	Boiler 36 and Stack	-	-	0.0137	0.287	7.501	7.788
1/28/2016	Boiler 32 and Stack	0.0018	0.018	0.02	0.9796	10.0497	11.029
11/1/2016 – 11/2/2016	Boiler 32 and Stack	INVALID	INVALID	INVALID	INVALID	INVALID	INVALID
11/2/2016 – 11/3/2016	Boiler 36 and Stack	0.001	0.02	0.021	-	12.95	12.95
10/10/2017	Boiler 32 and Stack	0.003	0.0017	0.0048	2.059	1.164	3.223
10/8/2018	Boiler 31 and Stack	0.0043	0.0112	0.0154	2.588	6.73	9.318
10/9/2018	Boiler 32 and Stack	0.0036	0.0126	0.0163	2.232	7.77	10.002
10/11/2018	Boiler 33 and Stack	0.0053	0.0098	0.0151	3.156	5.853	9.009
10/12/2018	Boiler 34 and Stack	0.0051	0.0063	0.0114	3.3	4.075	7.375

⁷ The data provided in each of BP's stack tests indicate that they account for PM₁₀ emissions from both the 3SPS Boilers individually, as well as their associated Duct Burners and SCRs, and their compliance certifications indicate that they have been submitted to demonstrate compliance with both the boiler-specific PM₁₀ limitations and the combined PM₁₀ limitation for Stacks 503-01 through 503-05. The stack tests, however, do not clearly state precisely how BP calculated emissions from each separate unit. While Citizens have not been able to determine from these stack tests precisely what methodology BP used to account for emissions from each separate unit, the results for each stack test clearly indicate that BP failed both limits regardless. (It is particularly worth noting that in almost all cases, BP's test results indicate that it far exceeded **both** PM₁₀ limits on the basis of condensable PM₁₀ **alone**). As discussed further below, IDEM has also determined that the results of each of these stack tests demonstrated non-compliance with both limits.

⁸ Citizens have been unable to obtain BP's reports for the August 3, 2015 stack test at Boiler 32 and the August 5, 2015 stack test at Boiler 36, as they are not publicly available through IDEM's website or Virtual File Cabinet. The results for these two tests have been obtained from an April 8, 2016 letter sent from IDEM to BP regarding these two tests. *See* Enforcement Referral Letter from Rick Massoels, IDEM Deputy Director of Northwest Regional Office, to Linda Wilson, BP Products North America, Inc. (April 8, 2016).

⁹ *See supra* note 8.

A. Violations of the Indiana SIP and Title V Permit PM₁₀ Limits at 3SPS Boiler 31 and Stack 503-01

October 8, 2018

On October 8, 2018, BP's stack performance test for Boiler 31 recorded an average PM₁₀ emissions rate of 0.0154 lb/mmBtu, and 9.318 lb/hour. *See* Compliance Emissions Test Report, Boiler 31 Stack (October 8, 2018) at Section 3.0, Page 4. Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 31 and Stack 503-01 on October 8, 2018. *See* Office Memorandum re: BP Products North America, Inc. from Thomas A. Kline, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (January 10, 2019). The following violations are currently ongoing, and continuing for each day until BP successfully demonstrates compliance with the limit in accordance with the procedures set forth in 40 CFR 60, Appendix A, Methods 1-5 and 326 IAC 3-6.

Claim 1: Effective October 8, 2018, Boiler 31 is in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing, and have continued for 138 days through February 22, 2019.¹⁰

Claim 2: Effective October 8, 2018, Boiler 31 is in violation of Section D.24.1 of its 2018 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing, and have continued for 138 days through February 22, 2019.

Claim 3: Effective October 8, 2018, Stack 503-01 is in violation of Section D.24.4(b)(2) of its 2018 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing, and have continued for 138 days through February 22, 2019.

B. Violations of the Indiana SIP and Title V Permit PM₁₀ Limits at 3SPS Boiler 32 and Stack 503-02

1. August 3, 2015

On August 3, 2015, BP's stack performance test for Boiler 32 recorded an average PM₁₀ emissions rate of 0.0171 lb/mmBtu, and 10.33 lb/hour. *See* Enforcement Referral Letter from Rick Massoels, IDEM Deputy Director of Northwest Regional Office, to Linda Wilson, BP Products North America, Inc. (April 8, 2016). Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 32 and Stack 503-02 on August 3, 2015. *Id.*

Claim 1: Effective August 3, 2015, Boiler 32 was in violation of the 0.0075 lb/mmBtu

¹⁰ Table 3 provides a summary of each unit's violations, the date ranges for said violations, and the calculated total days of continuous violation based on those date ranges.

and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations continued each day until October 10, 2017, for a total of 799 days, when BP's stack performance test for Boiler 32 recorded an average PM₁₀ emissions rate of 0.0048 lb/mmBtu, and 3.223 lb/hour. *See Compliance Emissions Test Report, Boiler 32 Stack (October 10, 2017) at Section 3.0, Page 4.*

Claim 2: Effective August 3, 2015, Boiler 32 was in violation of Section D.24.1 of the 2015 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations continued each day until October 10, 2017, for a total of 799 days.

Claim 3: Effective August 3, 2015, Stack 503-02 was in violation of Section D.24.4(b)(3) of the 2015 Title V Permit, which limits PM₁₀ emissions at each combined Boiler, Duct Burner, and SCR stack to 0.010 lb/mmBtu. These violations continued each day until October 10, 2017, for a total of 799 days.

2. October 20, 2015

On October 20, 2015, BP's stack performance test for Boiler 32 recorded an average PM₁₀ emissions rate of 0.0177 lb/mmBtu, and 9.937 lb/hour. *See Compliance Emission Test, Boiler 32 Stack (October 20, 2015) at Table 4-1, Page 4-2.* Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 32 and Stack 503-02 on October 20, 2015. *See Office Memorandum re: BP Products North America, Inc. from Doug Van Demark, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (July 25, 2016).*

Claim 1: Effective October 20, 2015, Boiler 32 remained in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations continued each day until October 10, 2017.

Claim 2: Effective October 20, 2015, Boiler 32 remained in violation of Section D.24.1 of the 2015 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations continued each day until October 10, 2017.

Claim 3: Effective October 20, 2015, Stack 503-02 remained in violation of Section D.24.4(b)(3) of the 2015 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations continued each day until October 10, 2017.

3. January 28, 2016

On January 28, 2016, BP's stack performance test for Boiler 32 recorded an average PM₁₀ emissions rate of 0.02 lb/mmBtu, and 11.029 lb/hour. *See Report on Particulate Testing, Boiler 32 Stack (January 28, 2016) at Table 2-1, Page 2-1.* Based on these results, IDEM

determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 32 and Stack 503-02 on January 28, 2016. *See* Office Memorandum re: BP Whiting from Luke Boyer, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (June 1, 2016).

Claim 1: Effective January 28, 2016, Boiler 32 remained in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations continued each day until October 10, 2017.

Claim 2: Effective January 28, 2016, Boiler 32 remained in violation of Section D.24.1 of the 2015 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations continued each day until October 10, 2017.

Claim 3: Effective January 28, 2016, Stack 503-02 remained in violation of Section D.24.4(b)(3) of the 2015 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations continued each day until October 10, 2017.

4. November 2, 2016

On November 2, 2016, BP's stack performance test for Boiler 32 recorded an average PM₁₀ emissions rate of 0.0047 lb/mmBtu, and 2.806 lb/hour. *See* Compliance Emissions Test Report, Boiler 32 Stack and Boiler 36 Stack (November 1-3, 2016) at Section 3.0, Page 5. However, IDEM's review found that the reported results were invalid, because BP's report had not included the sum of all filterable and condensable PM₁₀ in calculating PM₁₀, as explicitly required by 326 IAC 6.8-2-6 and BP's Title V Permit. *See* Office Memorandum re: BP Products North America from Kale Popp, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (September 18, 2017). Accordingly, IDEM determined that because PM₁₀ emissions could not be accurately calculated from Boiler 32, the stack test could not be used for compliance determination. Accordingly, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 32 and Stack 503-02 on November 2, 2016. *Id.*

Claim 1: Effective November 2, 2016, Boiler 32 remained in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations continued each day until October 10, 2017.

Claim 2: Effective November 2, 2016, Boiler 32 remained in violation of Section D.24.1 of the 2016 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations continued each day until October 10, 2017.

Claim 3: Effective November 2, 2016, Stack 503-02 remained in violation of Section

D.24.4(b)(2) of the 2016 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations continued each day until October 10, 2017.

5. October 9, 2018

On October 9, 2018, BP's stack performance test for Boiler 32 recorded an average PM₁₀ emissions rate of 0.0163 lb/mmBtu, and 10.002 lb/hour. *See* Compliance Emissions Test Report, Boiler 32 Stack (October 9, 2018) at Section 3.0, Page 4. Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 32 and Stack 503-02 on October 9, 2018. *See* Office Memorandum re: BP Products North America, Inc. from Thomas A. Kline, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (January 10, 2019).

Claim 1: Effective October 9, 2018, Boiler 32 is in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing, and have continued for 137 days through February 22, 2019.

Claim 2: Effective October 9, 2018, Boiler 32 is in violation of Section D.24.1 of the 2018 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing, and have continued for 137 days through February 22, 2019.

Claim 3: Effective October 9, 2018, Stack 503-02 is in violation of Section D.24.4(b)(2) of the 2018 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing, and have continued for 137 days through February 22, 2019.

C. Violations of the Indiana SIP and Title V Permit PM₁₀ Limits at 3SPS Boiler 33 and Stack 503-03

1. October 11, 2018

On October 11, 2018, BP's stack performance test for Boiler 33 recorded an average PM₁₀ emissions rate of 0.0151 lb/mmBtu, and 9.009 lb/hour. *See* Compliance Emissions Test Report, Boiler 33 Stack (October 11, 2018) at Section 3.0, Page 4. Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 33 and Stack 503-03 on October 11, 2018. *See* Office Memorandum re: BP Products North America, Inc. from Thomas A. Kline, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (January 10, 2019).

Claim 1: Effective October 11, 2018, Boiler 33 is in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing, and have continued for 135 days through February 22, 2019.

Claim 2: Effective October 11, 2018, Boiler 33 is in violation of Section D.24.1 of the 2018 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing, and have continued for 135 days through February 22, 2019.

Claim 3: Effective October 11, 2018, Stack 503-03 is in violation of Section D.24.4(b)(2) of the 2018 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing, and have continued for 135 days through February 22, 2019.

D. Violations of the Indiana SIP and Title V Permit PM₁₀ Limits at 3SPS Boiler 34 and Stack 503-04

1. October 12, 2018

On October 12, 2018, BP's stack performance test for Boiler 34 recorded an average PM₁₀ emissions rate of 0.0114 lb/mmBtu, and 7.375 lb/hour. *See* Compliance Emissions Test Report, Boiler 34 Stack (October 12, 2018) at Section 3.0, Page 4. Based on these results, IDEM determined that BP's compliance with its PM₁₀ emissions limitations could not be determined for either Boiler 34 or Stack 503-04 on October 12, 2018. *See* Office Memorandum re: BP Products North America, Inc. from Thomas A. Kline, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (January 10, 2019). While IDEM's memorandum does not explain its determination further, the results of BP's performance test demonstrate facially clear violations of both PM₁₀ emissions limitations on October 12, 2018.

Claim 1: Effective October 12, 2018, Boiler 34 is in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing, and have continued for 134 days through February 22, 2019.

Claim 2: Effective October 12, 2018, Boiler 34 is in violation of Section D.24.1 of the 2018 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing, and have continued for 134 days through February 22, 2019.

Claim 3: Effective October 12, 2018, Stack 503-04 is in violation of Section D.24.4(b)(2) of the 2018 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing, and have continued for 134 days through February 22, 2019.

E. Violations of the Indiana SIP and Title V Permit PM₁₀ Limits at 3SPS Boiler 36 and Stack 503-05

1. August 5, 2015

On August 5, 2015, BP's stack performance test for Boiler 36 recorded an average PM₁₀ emissions rate of 0.0151 lb/mmBtu, and 9.42 lb/hour. *See* Enforcement Referral Letter from Rick Massoels, IDEM Deputy Director of Northwest Regional Office, to Linda Wilson, BP Products North America, Inc. (April 8, 2016). Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 36 and Stack 503-05 on August 5, 2015. *Id.*

Claim 1: Effective August 5, 2015, Boiler 36 was in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing, and have continued for 1,298 days through February 22, 2019.

Claim 2: Effective August 5, 2015, Boiler 36 was in violation of Section D.24.1 of the 2015 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing, and have continued for 1,298 days through February 22, 2019.

Claim 3: Effective October 20, 2015, Stack 503-05 was in violation of Section D.24.4(b)(3) of the 2015 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing, and have continued for 1,298 days through February 22, 2019.

2. October 21, 2015

On October 21, 2015, BP's stack performance test for Boiler 36 recorded an average PM₁₀ emissions rate of 0.0137 lb/mmBtu, and 7.788 lb/hour, *See* Compliance Emission Test, Boiler 36 Stack (October 21, 2015) at Table 4-1, Page 4-2. Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 36 and Stack 503-05 on October 21, 2015. *See* Office Memorandum re: BP Products North America, Inc. from Doug Van Demark, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (July 25, 2016).

Claim 1: Effective October 21, 2015, Boiler 36 remained in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing.

Claim 2: Effective October 21, 2015, Boiler 36 remained in violation of Section D.24.1 of the 2015 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing.

Claim 3: Effective October 21, 2015, Stack 503-05 remained in violation of Section D.24.4(b)(3) of the 2015 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing.

3. November 3, 2016

On November 3, 2016, BP's stack performance test for Boiler 36 recorded an average PM₁₀ emissions rate of 0.0079 lb/mmBtu, and 4.741 lb/hour. *See* Compliance Emissions Test Report, Boiler 32 Stack and Boiler 36 Stack (November 1-3, 2016) at Section 3.0, Page 7. However, IDEM's review found that the reported results were invalid, because BP's report had not included the sum of all filterable and condensable PM₁₀ in calculating PM₁₀, as explicitly required by 326 IAC 6.8-2-6 and BP's 2016 Title V Permit. *See* Office Memorandum re: BP Products North America from Kale Popp, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (September 18, 2017).

Upon recalculating the results, IDEM determined that Boiler 36 had actually averaged a PM₁₀ emissions rate of 0.021 lb/mmBtu, and 12.95 lb/hour. *Id.* This was a violation of the Indiana SIP PM₁₀ emissions limitations specifically applicable to the 3SPS Boilers, 2016 Permit Section D.24.1; 326 IAC 6.8-2-6, as well as a separate violation of the 0.010 lb/mmBtu PM₁₀ emissions limitation applicable to each combined Boiler Stack. 2016 Title V Permit Section D.24.4(b)(2). Based on these results, IDEM determined that BP was out of compliance with its PM₁₀ emissions limitations for both Boiler 36 and Stack 503-05 on November 3, 2016. *See* Office Memorandum re: BP Products North America from Kale Popp, IDEM Office of Air Quality, to Rick Massoels, Deputy Director of the Northwest Regional Office (September 18, 2017).

Claim 1: Effective November 3, 2016, Boiler 36 remained in violation of the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations applicable to each 3SPS Boiler stack under Indiana SIP provision 326 IAC 6.8-2-6(a). These violations are ongoing.

Claim 2: Effective November 3, 2016, Boiler 36 remained in violation of Section D.24.1 of the 2016 Title V Permit, which explicitly incorporates the 0.0075 lb/mmBtu and 4.28 lb/hour PM₁₀ emissions limitations of 326 IAC 6.8-2-6(a), making them enforceable conditions of that permit. These violations are ongoing.

Claim 3: Effective November 3, 2016, Stack 503-05 remained in violation of Section D.24.4(b)(2) of the 2016 Title V Permit, which limits PM₁₀ emissions at each combined Boiler Stack 503-01 through 503-05 to 0.010 lb/mmBtu. These violations are ongoing.

F. Violations of the Title V Permit Compliance Testing Requirements at 3SPS Boiler 36 and Stack 503-05

Section C.19(b) of the 2016 Title V Permit explicitly states that when "the results of a stack test... exceed the level specified in any condition of this permit," BP is required to perform a retest to demonstrate compliance "no later than one hundred eighty (180) days after the date of the test." As noted above, BP's November 3, 2016 stack performance test for Boiler 36

demonstrated violations of its applicable PM₁₀ emissions limitations for both Boiler 36 and Stack 503-05. May 2, 2017 was the final day in the 180-day period in which BP was required to conduct a retest at Boiler 36. To date, BP has not retested to demonstrate compliance with its applicable PM₁₀ emissions limitations for either Boiler 36 or Stack 503-05.

Claim 1: Effective May 3, 2017, BP is in violation of its requirement under Section C.19(b) of the 2016 Title V Permit to perform a retest to demonstrate compliance at Boiler 36 and Stack 503-05 “no later than one hundred eighty (180) days” after the November 3, 2016 stack test failure. These violations are on-going, and have continued for 661 days through February 22, 2019.

IV. AUTHORITY TO BRING SUIT

Section 304 of the CAA authorizes citizens, upon providing a 60-day notice of intent, to bring suit “against any person... who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of [] an emission standard or limitation” established under the CAA. 42 U.S.C. § 7604(a)(1). Section 304 defines “emission standard or limitation” in relevant part as any “emission limitation, standard of performance or emission standard,” which includes “any other standard, limitation, or schedule established under any permit issued under [Title V] or under any applicable State implementation plan approved by the Administrator, any permit term or condition, and any requirement to obtain a permit as a condition of operation.” 42 U.S.C. § 7604(f)(1)-(4).

As discussed above, BP’s stack test reports show that BP is currently in violation of its applicable PM₁₀ emissions limitations under Indiana SIP provision 326 IAC 6.8-2-6(a), Section D.24.1 of its Title V Operating Permit, and Section D.24.4(b) of its Title V Operating Permit at Boilers 31, 32, 33, 34, and 36, and Stacks 503-01 through 503-05. Furthermore, there is clear evidence that these violations have been repeated, as 11 of the 12 stack tests performed at the 3SPS Boilers and Stacks 503-01 through 503-05 since August of 2015 show that they have failed their applicable PM₁₀ emissions limitations, with five of these stack test failures occurring at Boiler 32 and Stack 503-02 alone. Moreover, with the sole exception of the October 10, 2017 Boiler 32 stack test, **no** available stack tests indicate that BP has **ever** successfully demonstrated compliance with the applicable PM₁₀ emissions limitations for the 3SPS Boilers or Stacks 503-01 through 503-05. Consequently, BP has currently accrued **8,584 days of continuous violations** of its applicable PM₁₀ emissions limitations and stack testing requirements since August of 2015:

Table 3: Total Days of Continuous Violation

Unit(s)	Date Range of Violations	Days in Violation of:				Total Days
		326 IAC 6.8-2-6(a)	Section D.24.1	Section D.24.4(b)	Section C.19	
Boiler 31 and Stack 503-01	10/8/2018 – Present	138	138	138	-	414
Boiler 32 and Stack 503-02	8/3/2015 – 10/10/2017	799	799	799	-	2,397
Boiler 32 and Stack 503-02	10/9/2018 – Present	137	137	137	-	411
Boiler 33 and Stack 503-03	10/11/2018 – Present	135	135	135	-	405
Boiler 34 and Stack 503-04	10/12/2018 – Present	134	134	134	-	402
Boiler 36 and Stack 503-05	8/5/2015 – Present	1,298	1,298	1,298	-	3,894
Boiler 36 and Stack 503-05	5/3/2017 – Present	-	-	-	661	661
TOTAL DAYS OF VIOLATIONS						8,584 days

42 U.S.C. § 7604(f)(4). Section 113 of the CAA provides that any person who is in violation of any such emission standard, limitation, or other permit condition or requirement, may be subject to “a civil penalty of not more than \$25,000 per day for each violation.” 42 U.S.C. § 7413(b). The amount of this statutory civil penalty is subject to a mandatory inflation adjustment under EPA’s 2018 Civil Monetary Penalty Inflation Rule,¹¹ promulgated pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 and the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015. Applying this mandatory inflation adjustment, violations of Section 113(b) of the CAA which occur after November 2, 2015, and for which penalties are assessed at any time on or after January 15, 2018, are subject to an adjusted civil penalty of **\$97,229 per day, for each violation.**¹² In total, **8,402** days of the violations alleged above occurred after November 2, 2015, and are subject to this adjusted

¹¹ U.S. Environmental Protection Agency. *Final Rule: Civil Monetary Penalty Inflation Adjustment Rule*. 83 Fed. Reg. 1190 (January 10, 2018).

¹² *Id.* at 1193.

maximum civil penalty, while **182** days of the violations above occurred on or prior to November 2, 2015 and are subject to the base statutory maximum civil penalty.

V. PERSONS RESPONSIBLE FOR VIOLATIONS

The Whiting Refinery is owned and operated by BP Products North America Inc., a subsidiary of BP p.l.c.. BP Products North America Inc. is the legal owner and operator of the Whiting Refinery, is in control of day to day operations, and is therefore a “person” as defined by the Clean Air Act who is responsible for the violations alleged herein.

VI. PERSONS GIVING NOTICE

The Environmental Integrity Project is a nonpartisan, nonprofit watchdog organization founded in 2002 by former Environmental Protection Agency enforcement attorneys to advocate for more effective enforcement of environmental laws at the national, state, and local level. EIP’s main office is located at 1000 Vermont Avenue NW, Suite 1100, Washington, D.C. 20005. EIP’s three main organizational objectives are: (1) to illustrate through objective facts and figures how the failure to enforce or implement environmental laws increases pollution and negatively affects the public’s health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help local communities in key states obtain the protection of environmental laws.

The Sierra Club is the nation’s oldest environmental grassroots organization, and has more than 3.5 million members and supporters nationwide. Sierra Club is incorporated in the State of California as a nonprofit public benefit corporation, and its national office is located at 2101 Webster Street, Suite 1300, Oakland, CA 94612. In coordination with its national community of volunteers, advocates, and grassroots activists, Sierra Club is dedicated to protecting, preserving, and restoring the quality of our natural and human environments, and practicing and promoting the responsible use of ecosystems and resources. Sierra Club is a leading non-governmental organization in the efforts to educate and mobilize the public on issues of climate change, fossil fuel energy, and clean energy, and conducts multiple public campaigns around these issues. Several of Sierra Club’s members live in close proximity to the BP Whiting Refinery, are potentially exposed to particulate emissions from the BP Whiting Refinery, including the unlawful emissions of PM₁₀ from the 3SPS Boilers and Boiler Stacks described above, and would ordinarily have standing to sue in their own right.

VII. CONCLUSION

BP has violated the PM₁₀ emissions limitations required both by the Indiana SIP and its Title V operating permit for Whiting Refinery on multiple occasions at the 3SPS Boilers and their associated Stacks. Evidence suggests that these violations are both ongoing and recurring, and almost certain to recur in the future absent intervention.

Accordingly, this letter serves to notify BP that, in accordance with Section 304(b)(1)(A) of the CAA, Citizens intend to file suit in a federal district court to remedy these violations of the CAA identified above at any time upon the expiration of the 60-day period after the postmarked

date of this letter. 40 C.F.R. §§ 54.2 and 54.3. In doing so, Citizens may seek to obtain declaratory relief, enjoin future violations of limitations, compel compliance with the requirements of the CAA, the Indiana SIP, and BP's Title V Operating Permit, abate pollution, recover attorney's fees and costs of litigation, and obtain any other relief that may be necessary or appropriate.

If you believe any of the above information is incorrect, believe you are currently in compliance with the Clean Air Act, would like to take steps to permanently correct any of the described violations, or have any questions concerning this letter or the described violations, please contact me as soon as possible at (202) 263-4441, or at the address or email listed below for the undersigned. As mentioned above, we welcome and would be happy to meet with you, within 45 days of this notice letter, to discuss resolution of the matters raised.

Sincerely,

/s/ Eric Schaeffer

Eric V. Schaeffer
Director
Environmental Integrity Project
1000 Vermont Avenue NW, Suite 1100
Washington, DC 20005
(202) 263-4440
eschaeffer@environmentalintegrity.org

/s/ Sanghyun Lee

Sanghyun Lee
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Counsel for Environmental Integrity Project and Sierra Club

CC (Via Email):

Aaron Isherwood
Phillip S. Berry Managing Attorney
Sierra Club
2101 Webster St., Suite 1300
Oakland, CA 94612

CC (Via Certified Mail):

Cathy Stepp, Regional Administrator
U.S. Environmental Protection Agency
Region 5
Ralph Metcalfe Federal Building
77 West Jackson Boulevard
Chicago, IL 60604-3590

Governor Eric J. Holcomb
Office of the Governor
200 W. Washington Street
Room 206
Indianapolis, IN 46204

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U.S. Environmental Protection Agency
Office of the Administrator (1101A)
1200 Pennsylvania Avenue NW
Washington, DC 20460



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1. Article Addressed to:

Jessica L. Gonzalez
Managing Attorney - HSSE
BP Products North America Inc.
150 W. Warrenville Road
Mail Code 200-1 W
Naperville, IL 60563



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1. Article Addressed to:

Donald Porter
Whiting Refinery Manager
BP Whiting Refinery
2815 Indianapolis Boulevard
Whiting, IN 46394



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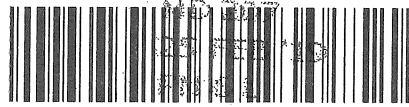
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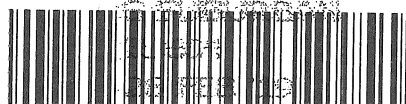
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1. Article Addressed to:

Cathy Stepp, Regional Administrator
U.S. EPA Region 5
Ralph Metcalfe Federal Building
77 West Jackson Boulevard
Chicago, IL 60604-3590



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C. Date of Delivery

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Office of the Indiana Attorney General
Environmental Litigation Division
Indiana Government Center South - 5th Floor
301 West Washington Street
Indianapolis, IN 46204



9590 9402 4633 8323 6696 29

2. Article Number (Transfer from service label)

7018 1130 0000 3841 1316

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

HSSE Manager
BP Whiting Refinery
2815 Indianapolis Boulevard
Whiting, IN 46394



9590 9402 4633 8323 6696 05

2. Article Number (Transfer from service label)

7018 1130 0000 3841 1347

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☒ No

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

Insured Mail Restricted Delivery (over \$500)

Domestic Return Receipt

USPS TRACKING#



9590 9402 4633 8323 6696 67

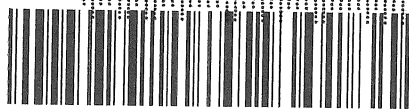
United States
Postal Service

• Sender: Please print your name, address, and ZIP+4® in this box•

Sanghyun Lee
Environmental Integrity Project
1000 Vermont Avenue NW
Suite 1100
Washington, DC 20005-4903

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

USPS TRACKING#



9590 9402 4633 8323 6696 29

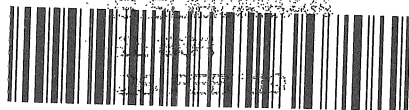
United States
Postal Service

• Sender: Please print your name, address, and ZIP+4® in this box•

Sanghyun Lee
Environmental Integrity Project
1000 Vermont Avenue NW
Suite 1100
Washington, DC 20005-4903

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

USPS TRACKING#



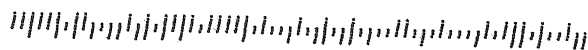
9590 9402 4633 8323 6696 05

United States
Postal Service

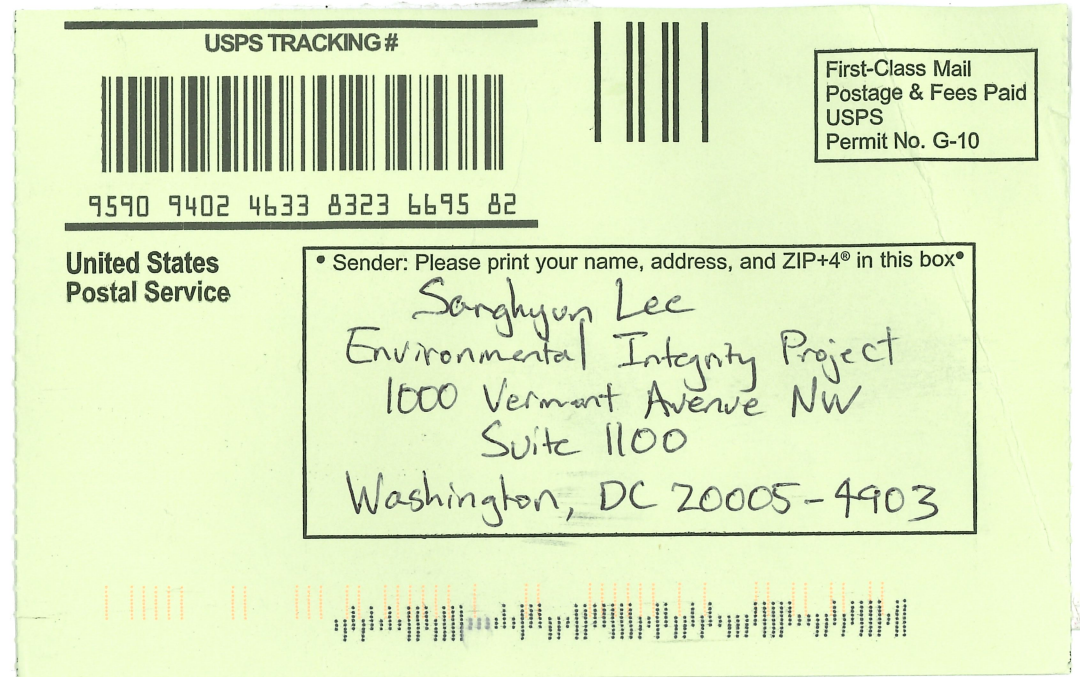
• Sender: Please print your name, address, and ZIP+4® in this box•

Sanghyun Lee
Environmental Integrity Project
1000 Vermont Avenue NW
Suite 1100
Washington, DC 20005-4903

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10



SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature  <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. Article Addressed to:</p> <p>Chief, Air Compliance and Enforcement IN Department of Environmental Management 100 North Senate Avenue MC 61-53, IGCN 1003 Indianapolis, IN 46204-2251</p>		<p>B. Received by (Printed Name) Received</p>	<p>C. Date of Delivery FEB 26 2019</p>
<p>2. Article Number (Transfer from service label) 7018 1130 0000 3841 1309</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p>	
<p>9590 9402 4633 8323 6695 82</p>		<p>Dept of Environmental Management Office of Air Quality</p>	
<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature</p> <p><input type="checkbox"/> Adult Signature Restricted Delivery</p> <p><input checked="" type="checkbox"/> Certified Mail®</p> <p><input type="checkbox"/> Certified Mail Restricted Delivery</p> <p><input type="checkbox"/> Collect on Delivery</p> <p><input type="checkbox"/> Collect on Delivery Restricted Delivery</p> <p><input type="checkbox"/> Insured Mail (over \$500)</p>		<p><input type="checkbox"/> Priority Mail Express®</p> <p><input type="checkbox"/> Registered Mail™</p> <p><input type="checkbox"/> Registered Mail Restricted Delivery</p> <p><input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Signature Confirmation™</p> <p><input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>Domestic Return Receipt</p>	



Sanghyun Lee

From: auto-reply@usps.com
Sent: Monday, March 25, 2019 1:37 PM
To: Sanghyun Lee
Subject: USPS® Item Delivered, Left with Individual 70181130000038411286



Hello **Sanghyun Lee**,

Your item was delivered to an individual at the address at 9:03 am on February 26, 2019 in INDIANAPOLIS, IN 46204.

Tracking Number: [70181130000038411286](#)

Delivered, Left with Individual



Tracking & Delivery Options

My Account

Visit [USPS Tracking®](#) to check the most up-to-date status of your package. Sign up for [Informed Delivery®](#) to digitally preview the address side of your incoming letter-sized mail and manage your packages scheduled to arrive soon! To update how frequently you receive emails from USPS, log in to your [USPS.com](#) account.

Want regular updates on your package? [Set up text alerts.](#)

INFORMED DELIVERY®

Sign up to view your mail
online or via email.



Tracking Number: 70181130000038411286

Remove X

Expected Delivery on

TUESDAY

26

FEBRUARY
2019 ⓘ

by
8:00pm ⓘ

Status

✓ Delivered

February 26, 2019 at 9:03 am
Delivered, Left with Individual
INDIANAPOLIS, IN 46204

Get Updates ▼

Delivered

Text & Email Updates



Tracking History



February 26, 2019, 9:03 am

Delivered, Left with Individual
INDIANAPOLIS, IN 46204

Your item was delivered to an individual at the address at 9:03 am on February 26, 2019 in INDIANAPOLIS, IN 46204.

February 25, 2019, 5:45 pm

Delivery Attempted - No Access to Delivery Location
INDIANAPOLIS, IN 46204

February 25, 2019, 11:28 am

Arrived at Unit
INDIANAPOLIS, IN 46204

February 25, 2019, 12:46 am

EXHIBIT 3

CLEAN AIR ACT
STATIONARY SOURCE CIVIL PENALTY POLICY
OCTOBER 25, 1991

- 11 -

b. Toxicity of the pollutant

Violations of NESHAPs emission standards not handled by a separate appendix and non-NESHAP emission violations involving pollutants listed in Section 112(b)(1) of the Clean Air Act Amendments of 1990*: \$15,000 for each hazardous air pollutant for which there is a violation.

c. Sensitivity of environment (for SIP and NSPS cases only).

The penalty amount selected should be based on the status of the air quality control district in question with respect to the pollutant involved in the violation.

1. Nonattainment Areas

i. Ozone:

Extreme	\$18,000
Severe	16,000
Serious	14,000
Moderate	12,000
Marginal	10,000

ii. Carbon Monoxide and Particulate Matter:

Serious	\$14,000
Moderate	12,000

iii. All Other Criteria Pollutants: \$10,000

2. Attainment area PSD Class I: \$ 10,000

3. Attainment area PSD Class II or III: \$ 5,000

d. Length of time of violation

To determine the length of time of violation for purposes of calculating a penalty under this policy, violations should be assumed to be continuous from the first provable date of violation until the source demonstrates compliance if there have been no significant process or operational changes. If the source has affirmative evidence, such as continuous emission monitoring data,

* An example of a non-NESHAP violation involving a hazardous air pollutant would be a violation of a volatile organic compound (VOC) standard in a State Implementation Plan involving a VOC contained in the Section 112(b)(1) list of pollutants for which no NESHAP has yet been promulgated.

to show that the violation was not continuous, appropriate adjustments should be made. In determining the length of violation, the litigation team should take full advantage of the presumption regarding continuous violation in Section 113(e)(2). This figure should be assessed separately for each violation, including procedural violations such as monitoring, recordkeeping and reporting violations. For example, if a source violated an emissions standard, a testing requirement, and a reporting requirement, three separate length of violation figures should be assessed, one for each of the three violations based on how long each was violated.

<u>Months</u>	<u>Dollars</u>
0 - 1	\$ 5,000
2 - 3	8,000
4 - 6	12,000
7 - 12	15,000
13 - 18	20,000
19 - 24	25,000
25 - 30	30,000
31 - 36	35,000
37 - 42	40,000
43 - 48	45,000
49 - 54	50,000
55 - 60	55,000

2. Importance to the regulatory scheme

The following violations are also very significant in the regulatory scheme and therefore require the assessment of the following penalties:

Work Practice Standard Violations:

- failure to perform a work practice requirement: \$10,000-15,000
(See Appendix III for Asbestos NESHAP violations.)

Reporting and Notification Violations:

- failure to report or notify: \$15,000
- late report or notice: \$5,000
- incomplete report or notice: \$5,000 - \$15,000
(See Appendix III for Asbestos NESHAP violations.)

Recordkeeping Violations:

- failure to keep required records: \$15,000
- incomplete records: \$5,000 - \$15,000

EXHIBIT 4



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 27 2009

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Issuance of the Clean Air Act National Stack Testing Guidance

FROM: Lisa C. Lund *Lisa Lund*
Director
Office of Compliance

TO: Regional Compliance/Enforcement Division Directors

Attached is a copy of the revised Clean Air Act National Stack Testing Guidance. Final guidance was initially issued on September 30, 2005. At the time of issuance, the Agency indicated that notice and comment rulemaking would be conducted regarding the appropriate circumstances in which an extension of performance test deadlines may be allowed by regulation. This document incorporates the ensuing regulatory revisions which allow source owners or operators to petition for an extension to the test deadlines as a result of a force majeure event. It also includes other minor clarifications and revisions based on feedback we have received since issuance of the 2005 guidance. This revised guidance supersedes the 2005 guidance.

We appreciate the feedback that we have received from each of your offices as well as from state/local agencies. If you or your staff has any questions concerning the guidance, please contact Mamie Miller at (202) 431-7011, or Robert Lischinsky at (202) 564-2628.

Attachment

cc: Regional Air Compliance/Enforcement Branch Chiefs
Pamela Mazakas, Acting Director, Air Enforcement Division,
Office of Civil Enforcement
Peter Tsirigotis, Director, Sector Policies and Programs Division,
Office of Air Quality Planning and Standards (OAQPS)
Richard Wayland, Director, Air Quality Assessment Division, OAQPS
Compliance and Enforcement Committee Co-Chairs,
The National Association of Clean Air Agencies (NACAA)

- If the delegated agency chooses not to observe the test, prior review of the site-specific test plan is even more critical to ensure that the test is conducted in such a manner so as to satisfy the regulatory requirements.
- If the delegated agency was not provided timely notification and an opportunity to observe the stack test consistent with applicable regulatory requirements, the resulting test data may be rejected and a new stack test may be required. If this situation prevents the facility from completing a valid stack test within the requisite time frame, the facility is in violation of the requirement to conduct a stack test and demonstrate compliance. However, if the facility provided timely notice and the delegated agency did not respond or declined to observe the test, the test results should not be rejected solely because the test was not observed by agency personnel.

5. REPRESENTATIVE TESTING CONDITIONS

• The CAA requires that facilities comply with emissions limitations and emissions standards on a continuous basis. The Act defines the terms "emissions limitation " and "emission standard " in Section 302(k), 42 U.S.C. § 7602(k), as meaning "a requirement established by the state or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis" (emphasis added). The statute also authorizes penalties for multiple days of violations and establishes a presumption of continuing violations if certain conditions are met. CAA Section 113(e)(1) and (2), 42 U.S.C. §§ 7413(e)(1) and (2). EPA has consistently, in rulemaking and policy statements over many years, taken the position that the CAA requires continuous compliance with emissions limits except where compliance is explicitly excused. See, e.g., Guidance entitled "*Definition of 'Continuous Compliance' and Enforcement of O&M Violations*," (June 24, 1982) ("In the strict legal sense, sources are required to meet, without interruption, all applicable emissions limitations and other control requirements, unless such limitations specifically provide otherwise."); Credible Evidence Rulemaking, 62 FR 8314, 8323, 8324, 8326 8314 (Feb. 24, 1997) (emissions limits require continuous compliance (consistent with any averaging times) except during periods when compliance is specifically excused).

• Since the CAA requires continuous compliance with emissions limits except where explicitly excused, EPA interprets applicable regulations to require that any stack test that is conducted within the scope of this guidance must demonstrate that a facility is capable of complying with the applicable emissions standards at all times.⁴ The NSPS and MACT programs require that performance tests be conducted under such conditions as the Administrator specifies based upon the representative performance of the affected facility. See 40 CFR §§ 60.8© and 63.7(e). The MACT program further defines representative performance as normal operating conditions. 43 CFR § 63.7(e). Operations during periods of startup, shutdown and malfunction do not constitute representative conditions for the purposes of a performance test. 40 CFR §§ 60.8(c)

⁴ Complying with the applicable standards "at all times " does not include allowable periods of start-up, shutdown, and malfunction as provided in 40 CFR §§ 60.8 (c) and 63.7(e)(1).

and 63.7(e). The Part 61 NESHAP program requires that emission tests be conducted “under such conditions as the Administrator shall specify “based on design and operational characteristics of the source.” 40 CFR § 61.13(e). Individual standards may more specifically define operating conditions under which performance tests should be conducted. In the absence of such specifications, the question often arises as to what operating conditions should be used when conducting a stack test. If operating conditions are not indicated by the applicable requirements in individual standards, they should be developed as part of the site-specific test plan.

- In light of the fact that: (a) the Act requires that facilities continuously comply with emission limits; (b) the NSPS, MACT, and NESHAP programs all require that performance tests be conducted under such conditions as the Administrator specifies; and (c) the NSPS and MACT programs further require that such tests be conducted under representative operating conditions; EPA recommends that performance tests be performed under those representative (normal) conditions that:

- represent the range of combined process and control measure conditions under which the facility expects to operate (regardless of the frequency of the conditions); and

- are likely to most challenge the emissions control measures of the facility with regard to meeting the applicable emission standards, but without creating an unsafe condition.

- The following are factors that should be considered in developing the plan for a performance test that challenges to the fullest extent possible a facility’s ability to meet emissions limits.

- For a facility operating under an emission rate standard (e.g., lb/hr) or concentration standard (e.g., $\mu\text{g}/\text{m}^3$), normal process operating conditions producing the highest emissions or loading to a control device would generally constitute the most challenging conditions with regard to the emissions standard. If operating at maximum capacity would result in the highest levels of emissions, operating at this level would not create an unsafe condition, and the facility expects to operate at that level at least some of the time, EPA recommends that the facility should conduct a stack test at maximum capacity or the allowable/permitted capacity.

- For a facility operating under a control or removal efficiency standard (e.g., 98 percent control or removal of a specified pollutant), lower emissions loading at the inlet of a control device within the range of expected process operating conditions may often be the most challenging emissions control scenario for purposes of achieving the applicable standard. For facilities required to achieve such control or removal efficiency standards,

EPA recommends that the performance test include operating the facility under such expected lower emissions loading conditions.

- The test plan should generally include use of fuel, raw materials, and other

Soot-Blowing Emissions in Subpart D Compliance Testing" (August 31, 1987); from Kathleen M. Bennett to Directors, Air & Waste Management Divisions "*Restatement of Guidance on Emissions Associated with Soot-Blowing*" (May 7, 1982); from Edward E. Reich to Sandra S. Gardebring "*Representative Testing Requirements*" (November 21, 1980); Memoranda from Edward E. Reich to Leslie Carothers "*Integration of Soot-Blowing Emissions with Routine Operating Data for Existing Facilities*" (March 12, 1979); from Edward E. Reich to Enforcement Division Directors, Air and Hazardous Material Division Directors, and Surveillance and Analysis Division Directors "*NSPS Determination - Subpart D*" (March 6, 1979); and Memoranda from Edward E. Reich to Robert L. Markey "*Determination of Applicability to Subpart D*" (June 29, 1977).

6. STOPPAGES

- The primary issue is whether it is appropriate to stop a stack test being conducted to determine and demonstrate compliance once it has been started, and if so, under what circumstances.
- There are no regulatory provisions in the NSPS, NESHAP, or MACT programs that address whether a facility is allowed to stop a stack test once it has been started.⁶ Depending on the circumstances surrounding the stoppage, the facility may be found in violation of the requirement to conduct a stack test, the underlying regulatory requirement, or both. For example:

- If a facility stopped the stack test because it was exceeding applicable emission standards and would have failed the test, it would be considered in violation of both the requirement to conduct a stack test (if it does not complete a performance test by the applicable deadline) and to comply with the underlying regulatory requirement or permit condition. Consistent with 40 CFR §§ 60.11 and 61.12, any credible evidence may be used to demonstrate non-compliance. For major sources, the test should be reported in the Title V quarterly or semi-annual deviation reports, and taken into consideration as part of the annual compliance certifications. In addition, the stoppage should be reported as a failure in the national air data system, and an enforcement action should be initiated and penalties assessed consistent with the HPV Policy and CAA Civil Penalty Policy.

- If a facility is forced to stop a test due to a Force Majeure Event, the facility shall provide written notification to the Administrator in accordance with the applicable

to stack tests required by 40 CFR Parts 60, 61, and 63.

⁶ However, under 40 CFR § 63.7(e), the results of a test run may, upon approval from the Administrator, be replaced with the results of an additional test run in the event that a test run is discontinued because of forced shutdown or other circumstances discussed in the regulation. Under 40 CFR § 60.8(f), if a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued for certain types of circumstances beyond the owner or operator's control, the results of two runs may be used with the Administrator's approval.

regulations. The performance test shall be conducted as soon as practicable after the force majeure occurs. Whether to grant an extension to the performance test deadline is solely within the discretion of the Administrator. Until an extension has been approved by the Administrator, the facility remains strictly subject to the performance test requirements of the applicable regulations. 40 CFR §§ 60.8(a)(1-4), 61.13(a)(3-6), 63.7(a)(4).

7. POSTPONEMENTS

- The primary issue is whether it is appropriate to postpone a stack test to determine and demonstrate compliance once it has been scheduled, and if so, under what circumstances. See also the discussion of delays in conducting the performance test in the Section, "Stack Test Notifications."
- Postponements should be treated similar to stoppages. If a postponement results in the facility failing to complete the test within the required time frame, the facility is in violation of the requirement to test.
- Regardless of whether the postponement affects a facility's ability to test in a timely manner, the delegated agency should carefully scrutinize the circumstances surrounding the postponement to determine whether the facility was in violation of the underlying emission limitations, and therefore, postponed the test to avoid a documented violation. Consistent with 40 CFR §§ 60.11 and 61.12, any credible evidence may be used to demonstrate non-compliance or compliance.

8. TEST REPORTS

- The primary issue is what information is needed to adequately document the results of a stack test conducted to determine and demonstrate compliance.
- The written test report should be sufficient to assess compliance with the underlying regulatory requirements, permit conditions, or enforcement order, and adherence to the test requirements. When reviewing the site-specific test plan, the delegated agency should identify for the facility any information that should be included in the test report. During the actual test program, there are usually modifications to the procedures specified in the site-specific test plan, and these modifications should be documented in the test report.
- Similar to the site-specific test plan, certain basic elements should be addressed in a test report to document the testing conditions and results, and enable the delegated agency to determine whether a complete and representative stack test was performed. For a prototype of a sufficiently detailed test report, see *Emission Measurement Center Guideline Document* (GD-043), "*Preparation and Review of Emission Test Reports*," (December 1998) (www.epa.gov/ttn/emc/guidlnd.html). If the test report does not contain sufficient information with which to adequately review the testing process and data results, it is within the discretion of

EXHIBIT 5



Stack Test Guide



Indiana Department of Environmental Management

Timeframe for Conducting Stack Tests

The timeframe for conducting a stack test is usually outlined in a specific rule or a permit. Testing is usually required within 180 days after initial startup for new units. Periodic testing may occur over the life of a permit, such as once every five (5) years. Please consult your permit or the specific rule for the timeframes for conducting a test. Generally, sources cannot be granted an extension to a testing requirement unless allowed or identified in a rule or permit. Individual rules may establish different time periods for testing, and some may be shorter than the general provisions. For example, in 40 CFR 63.152(b), the "notice of compliance status" must be submitted by sources subject to NESHAP subpart G within 150 calendar days after the specified compliance dates. Should you have an issue or problem with the timeframe or test date, please consult the compliance data section prior to the date of the required test.

Observation of Tests

On the day of the compliance test, IDEM may choose to have an observer present for the testing. If present, the observer will discuss all applicable requirements with the source prior to the test being initiated. In some cases, an observer may not be present; therefore, it is the responsibility of the source to ensure the testing is conducted representative conditions. Should there be questions prior to or during the test, IDEM staff are available to assist you. A list of IDEM staff is available in appendix B.

Representative Testing Conditions

The source should verify production rates will meet the rates specified in 326 IAC 3-6-3 (b) (1), (2), or (3), and should record production rates periodically during the test. Sufficient information to allow for the production rates during the individual test runs to be determined must be recorded. Any applicable air pollution control device parameters required to be monitored by the source's permit should also be recorded in 15 minute increments or more frequently as applicable. Both production rates and parametric monitoring results should be included in the final test report that will be sent to IDEM. A source may elect to provide these records to their testing contractor for incorporation into the test report,

or they may elect to retain these records and incorporate them into the report once they receive it from their consultant. During the test, the source should document if any production problems or malfunctions occurred that might influence the results of the test. If an observer is on site, issues of this nature may be discussed with the observer; however, if no observer is present, you may contact a member of the compliance data section directly using the information contained in appendix B of this guidance. It is important that potential problems be identified during the test. While the test company is still on site, further conditional runs may be conducted as necessary to replace potentially biased test runs. If all parties are in agreement that a particular run or runs were conducted under emergency or malfunction conditions, these test runs may then be disqualified and replaced with the conditional test runs.

Test Reports

After the test has been concluded, a source has 45 days to submit the results of the testing to the Compliance Data Section pursuant to 326 IAC 3-6-4(b). The compliance data section reviews the results and confirms compliance. The test report is then filed for future reference if necessary.

For non-compliant tests, a source must follow the "actions related to non-compliance" condition in their permit (usually contained in section C of most permits under the section titled, "corrective actions and response steps").

EXHIBIT 6



AES-01

AIR EMISSION STATEMENT CERTIFICATION

State Form 52052 (3-05)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Instructions:

This is a required form for each air emission statement as well as any modifications.

The certification supplied with a source's permit may be used in lieu of this form

"Responsible Official" has the same meaning as defined in 326 IAC (34), and is usually designated in the General Information section of the permit.

IDEM - Office of Air Quality
Technical Support and Modeling Section - Mail Code 61-51
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Telephone: (317) 233-0178 or
Toll Free: 1-800-451-6027 x30178 (within Indiana)
<http://www.emissions.IN.gov/>

Part A: Contact Information

Part A is intended to provide basic information about the company submitting an Air Emission Statement and information on the Air Emission Statement preparer in case there is a question about the report.

1. Company Name: BP Products North America Inc Whiting R	2. Source ID: 1808900003
3. Mailing Address:	
City:	State: ZIP Code:
4. Name of Emission Statement Preparer: Julie	Kendall
5. Title of Emission Statement Preparer(optional): Environmental Specialist	
6. Telephone Number: (219)-370-3131	7. Facsimile Number(optional):
8. Electronic Mail Address (optional): julie.kendall@bp.com	

Part B: Emissions Summary

Part B is intended to aid in the review of data and to collect information about billable hazardous air pollutants

Emissions Statement Pollutants (Plant Wide)**Tons Emitted**

Ammonia(NH3)	49.9500
Carbon Monoxide (CO)	847.7900
Lead (PB)	0.0311
Nitrogen Dioxide (NO2)	1485.1700
Primary PM Condensable Only (All Less Than 1 Micron)(PM-CON)	509.7400
Primary PM10, Filterable Portion Only(PM10-FIL)	467.2100
Primary PM2.5, Filterable Portion Only(PM25-FIL)	235.7400
Sulfur Dioxide (SO2)	387.8700
Volatile Organic Compounds (VOC)	927.1835

Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)**Tons Emitted**

No Billable Hazardous Air Pollutants reported! 0.0000

Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparer and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

Don Porter

Refinery Manager

Name of Responsible Official (typed or printed)

Title of Responsible Official

June 27, 2017

Signature of Responsible Official

Date (month, day, year)

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25

Spring: 25

Summer: 25

Fall: 25

Days Per Week: 7

Weeks Per Year: 52

Hours Per Day: 24

Hours Per Year: 8760

Process ID: 50301A

Description: 3SPS - Blr 1

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3095847

Million BTUs

Material: Process Gas

Stack: 503-01

Description: 3SPS - Blr 1

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	15.48
VOC	Engineering Judgement	0	0	8.36
NH3	Engineering Judgement	0	0	5.71
PM25-FIL	Engineering Judgement	0	0	0
PM-CON	Engineering Judgement	0	0	18.58
CO	CEMS - Continuous Emission Monitoring	0	0	8.06
SO2	CEMS - Continuous Emission Monitoring	0	0	15.35
NOX	CEMS - Continuous Emission Monitoring	0	50	22.84
7439921	Engineering Judgement	0	0	0.0008

Process ID: 50301B

Description: 3SPS - Duct Burner 1

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 242919

Million BTUs

Material: Process Gas

Stack: 503-01

Description: 3SPS - Blr 1

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	Engineering Judgement	0	0	0.63
NH3	Engineering Judgement	0	0	0.45
PM-CON	State/Local Speciation Profile	0	0	1.46
PM10-FIL	Engineering Judgement	0	0	1.21
VOC	Engineering Judgement	0	0	0.66
7439921	Engineering Judgement	0	0	0.0001
NOX	Engineering Judgement	0	0	1.75
PM25-FIL	Engineering Judgement	0	0	0
SO2	Engineering Judgement	0	0	1.21

Process ID: 50302A

Description: 3SPS - Blr 2

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2748324

Million BTUs

Material: Process Gas

Stack: 503-02

Description: 3SPS - Blr 2

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
NH3	Engineering Judgement	0	0	5.08
PM10-FIL	Engineering Judgement	0	0	20.59
PM-CON	Engineering Judgement	0	0	19.70

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25

Spring: 25

Summer: 25

Fall: 25

Days Per Week: 7

Weeks Per Year: 52

Hours Per Day: 24

Hours Per Year: 8760

Process ID: 50302A Description: 3SPS - Blr 2

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2748324 Million BTUs

Material: Process Gas

Stack: 503-02

Description: 3SPS - Blr 2

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
7439921	Engineering Judgement	0	0	0.0007
CO	CEMS - Continuous Emission Monitoring	0	0	9.35
SO2	CEMS - Continuous Emission Monitoring	0	0	13.23
NOX	CEMS - Continuous Emission Monitoring	0	50	23.87
PM25-FIL	Engineering Judgement	0	0	0
VOC	Engineering Judgement	0	0	2.75

Process ID: 50302B Description: 3SPS - Duct Burner 2

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 191805 Million BTUs

Material: Process Gas

Stack: 503-02

Description: 3SPS - Blr 2

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	0.65
SO2	CEMS - Continuous Emission Monitoring	0	0	0.93
PM-CON	State/Local Speciation Profile	0	0	1.39
PM25-FIL	Engineering Judgement	0	0	0
PM10-FIL	Engineering Judgement	0	0	1.45
VOC	Engineering Judgement	0	0	0.19
NOX	CEMS - Continuous Emission Monitoring	0	0	1.60
NH3	Engineering Judgement	0	0	0.36
7439921	Engineering Judgement	0	0	0.0000

Process ID: 50303A Description: 3SPS - Blr 3

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3171859 Million BTUs

Material: Process Gas

Stack: 503-03

Description: 3SPS - Blr 3

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	15.86
NOX	CEMS - Continuous Emission Monitoring	0	50	26.01
NH3	Engineering Judgement	0	0	5.84
VOC	Engineering Judgement	0	0	8.56
SO2	CEMS - Continuous Emission Monitoring	0	0	15.57
PM-CON	Engineering Judgement	0	0	19.03

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
 Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50303A Description: 3SPS - Blr 3

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3171859 Million BTUs

Material: Process Gas

Stack: 503-03
 Description: 3SPS - Blr 3
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	10.80
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0008

Process ID: 50303B Description: 3SPS - Duct Burner 3

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 220545 Million BTUs

Material: Process Gas

Stack: 503-03
 Description: 3SPS - Blr 3
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	0.72
SO2	CEMS - Continuous Emission Monitoring	0	0	1.09
7439921	Engineering Judgement	0	0	0.0001
NOX	CEMS - Continuous Emission Monitoring	0	0	1.74
PM-CON	State/Local Speciation Profile	0	0	1.32
PM10-FIL	Engineering Judgement	0	0	1.10
PM25-FIL	Engineering Judgement	0	0	0
VOC	Engineering Judgement	0	0	0.60
NH3	Engineering Judgement	0	0	0.41

Process ID: 50304A Description: 3SPS - Blr 4

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3630566 Million BTUs

Material: Process Gas

Stack: 503-04
 Description: 3SPS - Blr 4
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
NOX	CEMS - Continuous Emission Monitoring	0	50	31.48
7439921	Engineering Judgement	0	0	0.0009
PM25-FIL	Engineering Judgement	0	0	0
PM-CON	Engineering Judgement	0	0	21.78
SO2	CEMS - Continuous Emission Monitoring	0	0	17.62
PM10-FIL	Engineering Judgement	0	0	18.15
CO	CEMS - Continuous Emission Monitoring	0	0	10.42
VOC	Engineering Judgement	0	0	9.80
NH3	CEMS - Continuous Emission Monitoring	0	0	6.70

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25

Spring: 25

Summer: 25

Fall: 25

Days Per Week: 7

Weeks Per Year: 52

Hours Per Day: 24

Hours Per Year: 8760

Process ID: 50304B

Description: 3SPS - Duct Burner 4

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 240314

Million BTUs

Material: Process Gas

Stack: 503-04

Description: 3SPS - Blr 4

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
SO2	CEMS - Continuous Emission Monitoring	0	0	1.17
PM-CON	State/Local Speciation Profile	0	0	1.44
NOX	CEMS - Continuous Emission Monitoring	0	0	2.05
CO	CEMS - Continuous Emission Monitoring	0	0	0.71
NH3	Engineering Judgement	0	0	0.44
VOC	Engineering Judgement	0	0	0.65
PM10-FIL	Engineering Judgement	0	0	1.20
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0001

Process ID: 50305A

Description: 3SPS - Blr 6

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3220775

Million BTUs

Material: Process Gas

Stack: 503-05

Description: 3SPS - Blr 6

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM-CON	Engineering Judgement	0	0	18.67
VOC	Engineering Judgement	0	0	0.97
NOX	CEMS - Continuous Emission Monitoring	0	50	25.85
NH3	Engineering Judgement	0	0	5.93
PM25-FIL	Engineering Judgement	0	0	0
CO	CEMS - Continuous Emission Monitoring	0	0	11.88
SO2	CEMS - Continuous Emission Monitoring	0	0	15.60
PM10-FIL	Engineering Judgement	0	0	20.42
7439921	Engineering Judgement	0	0	0.0008

Process ID: 50305B

Description: 3SPS - Duct Burner 6

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 227510

Million BTUs

Material: Process Gas

Stack: 503-05

Description: 3SPS - Blr 6

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
NOX	CEMS - Continuous Emission Monitoring	0	0	1.76
PM-CON	State/Local Speciation Profile	0	0	1.31
PM25-FIL	Engineering Judgement	0	0	0

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput**Winter:** 25**Spring:** 25**Summer:** 25**Fall:** 25**Days Per Week:** 7**Weeks Per Year:** 52**Hours Per Day:** 24**Hours Per Year:** 8760**Process ID:** 50305B **Description:** 3SPS - Duct Burner 6**SCC:** 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200**Sulfur Content:** 0**Ash Content:** 0**Throughput:** 227510 Million BTUs**Material:** Process Gas**Stack:** 503-05**Description:** 3SPS - Blr 6**Stack Type:** Vertical**Height:** 200**Diameter:** 10**Temperature:** 500**Velocity:** 25**Gas Flow:** 115000**Input/Output:** Process Material Used (Input)

<u>Pollutant</u>	<u>Estimation Method</u>	<u>Factor</u>	<u>Overall Control Efficiency</u>	<u>Emission (Tons)</u>
SO2	CEMS - Continuous Emission Monitoring	0	0	1.10
CO	CEMS - Continuous Emission Monitoring	0	0	0.84
PM10-FIL	Engineering Judgement	0	0	1.44
7439921	Engineering Judgement	0	0	0.0001
NH3	Engineering Judgement	0	0	0.42
VOC	Engineering Judgement	0	0	0.07



AES-01

AIR EMISSION STATEMENT CERTIFICATION

State Form 52052 (3-05)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

IDEM - Office of Air Quality
Technical Support and Modeling Section - Mail Code 61-51
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Telephone: (317) 233-0178 or
Toll Free: 1-800-451-6027 x30178 (within Indiana)
<http://www.emissions.IN.gov/>

Instructions:

This is a required form for each air emission statement as well as any modifications.
The certification supplied with a source's permit may be used in lieu of this form
"Responsible Official" has the same meaning as defined in 326 IAC (34), and is usually designated in the General Information section of the permit.

Part A: Contact Information

Part A is intended to provide basic information about the company submitting an Air Emission Statement and information on the Air Emission Statement preparer in case there is a question about the report.

1. Company Name: BP Products North America Inc Whiting R		2. Source ID: 1808900003
3. Mailing Address:		
City:	State:	ZIP Code:
4. Name of Emission Statement Preparer: Julie Kendall		
5. Title of Emission Statement Preparer(optional): Environmental Specialist		
6. Telephone Number: (219)-370-3131	7. Facsimile Number(optional):	
8. Electronic Mail Address (optional): julie.kendall@bp.com		

Part B: Emissions Summary

Part B is intended to aid in the review of data and to collect information about billable hazardous air pollutants

Emissions Statement Pollutants (Plant Wide)

	Tons Emitted
Ammonia(NH3)	56.9700
Carbon Monoxide (CO)	588.3857
Lead (PB)	0.0344
Nitrogen Dioxide (NO2)	1439.9617
Primary PM Condensable Only (All Less Than 1 Micron)(PM-CON)	436.2304
Primary PM10, Filterable Portion Only(PM10-FIL)	451.6005
Primary PM2.5, Filterable Portion Only(PM25-FIL)	246.1102
Sulfur Dioxide (SO2)	322.5529
Volatile Organic Compounds (VOC)	659.0846

Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)

	Tons Emitted
No Billable Hazardous Air Pollutants reported!	0.0000

Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparer and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

Douglas Porter

Name of Responsible Official (typed or printed)

Rebecca Hunter

Title of Responsible Official

[Signature]

Signature of Responsible Official

06/28/18

Date (month, day, year)

Group ID: 603 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
 Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50301A Description: 3SPS - Blr 1

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3565884 Million BTUs

Material: Process Gas

Stack: 503-01
 Description: 3SPS - Blr 1
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	17.83
PM-CON	Engineering Judgement	0	0	21.40
VOC	Engineering Judgement	0	0	9.63
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0009
SO2	CEMS - Continuous Emission Monitoring	0	0	16.67
NOX	CEMS - Continuous Emission Monitoring	0	50	28.14
NH3	Engineering Judgement	0	0	6.53
CO	CEMS - Continuous Emission Monitoring	0	0	16.25

Process ID: 50301B Description: 3SPS - Duct Burner 1

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 264921 Million BTUs

Material: Process Gas

Stack: 503-01
 Description: 3SPS - Blr 1
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	Engineering Judgement	0	0	0.94
NH3	Engineering Judgement	0	0	0.49
VOC	Engineering Judgement	0	0	0.72
PM10-FIL	Engineering Judgement	0	0	1.32
7439921	Engineering Judgement	0	0	0.0001
NOX	Engineering Judgement	0	0	2.06
PM25-FIL	Engineering Judgement	0	0	0
SO2	Engineering Judgement	0	0	1.24
PM-CON	State/Local Speciation Profile	0	0	1.59

Process ID: 50302A Description: 3SPS - Blr 2

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3697950 Million BTUs

Material: Process Gas

Stack: 503-02
 Description: 3SPS - Blr 2
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0009
PM-CON	Engineering Judgement	0	0	2.96

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
 Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50302A Description: 3SPS - Blr 2

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200
 Sulfur Content: 0
 Ash Content: 0
 Throughput: 3697950 Million BTUs
 Material: Process Gas

Stack: 503-02
 Description: 3SPS - Blr 2
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000
 Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	16.43
VOC	Engineering Judgement	0	0	3.70
SO2	CEMS - Continuous Emission Monitoring	0	0	17.30
PM10-FIL	Engineering Judgement	0	0	8.69
NOX	CEMS - Continuous Emission Monitoring	0	50	28.65
NH3	Engineering Judgement	0	0	6.77

Process ID: 50302B Description: 3SPS - Duct Burner 2

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200
 Sulfur Content: 0
 Ash Content: 0
 Throughput: 225605 Million BTUs
 Material: Process Gas

Stack: 503-02
 Description: 3SPS - Blr 2
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000
 Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
VOC	Engineering Judgement	0	0	0.23
PM-CON	State/Local Speciation Profile	0	0	0.18
SO2	CEMS - Continuous Emission Monitoring	0	0	1.06
PM10-FIL	Engineering Judgement	0	0	0.53
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0001
CO	CEMS - Continuous Emission Monitoring	0	0	0.96
NH3	Engineering Judgement	0	0	0.41
NOX	CEMS - Continuous Emission Monitoring	0	0	1.71

Process ID: 50303A Description: 3SPS - Blr 3

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200
 Sulfur Content: 0
 Ash Content: 0
 Throughput: 2423542 Million BTUs
 Material: Process Gas

Stack: 503-03
 Description: 3SPS - Blr 3
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000
 Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	12.12
NH3	Engineering Judgement	0	0	4.43
PM-CON	Engineering Judgement	0	0	14.54
VOC	Engineering Judgement	0	0	6.54
CO	CEMS - Continuous Emission Monitoring	0	0	11.58
NOX	CEMS - Continuous Emission Monitoring	0	50	18.94

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
 Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50303A Description: 3SPS - Blr 3

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2423542 Million BTUs

Material: Process Gas

Stack: 503-03

Description: 3SPS - Blr 3

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM25-FIL	Engineering Judgement	0	0	0
SO2	CEMS - Continuous Emission Monitoring	0	0	11.55
7439921	Engineering Judgement	0	0	0.0006

Process ID: 50303B Description: 3SPS - Duct Burner 3

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 148279 Million BTUs

Material: Process Gas

Stack: 503-03

Description: 3SPS - Blr 3

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	0.68
NH3	Engineering Judgement	0	0	0.27
VOC	Engineering Judgement	0	0	0.40
NOX	CEMS - Continuous Emission Monitoring	0	0	1.13
SO2	CEMS - Continuous Emission Monitoring	0	0	0.71
PM10-FIL	Engineering Judgement	0	0	0.74
PM-CON	State/Local Speciation Profile	0	0	0.89
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0000

Process ID: 50304A Description: 3SPS - Blr 4

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3232491 Million BTUs

Material: Process Gas

Stack: 503-04

Description: 3SPS - Blr 4

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	16.16
NH3	CEMS - Continuous Emission Monitoring	0	0	5.92
NOX	CEMS - Continuous Emission Monitoring	0	50	18.55
PM25-FIL	Engineering Judgement	0	0	0
VOC	Engineering Judgement	0	0	8.73
SO2	CEMS - Continuous Emission Monitoring	0	0	15.64
PM-CON	Engineering Judgement	0	0	19.39
7439921	Engineering Judgement	0	0	0.0008
CO	CEMS - Continuous Emission Monitoring	0	0	11.40

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
 Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50304B Description: 3SPS - Duct Burner 4

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 202193 Million BTUs

Material: Process Gas

Stack: 503-04

Description: 3SPS - Blr 4

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	1.01
CO	CEMS - Continuous Emission Monitoring	0	0	0.70
NOX	CEMS - Continuous Emission Monitoring	0	0	1.15
SO2	CEMS - Continuous Emission Monitoring	0	0	0.98
NH3	Engineering Judgement	0	0	0.37
PM-CON	State/Local Speciation Profile	0	0	1.21
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0000
VOC	Engineering Judgement	0	0	0.55

Process ID: 50305A Description: 3SPS - Blr 6

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3613984 Million BTUs

Material: Process Gas

Stack: 503-05

Description: 3SPS - Blr 6

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
VOC	Engineering Judgement	0	0	1.08
7439921	Engineering Judgement	0	0	0.0009
SO2	CEMS - Continuous Emission Monitoring	0	0	16.87
PM10-FIL	Engineering Judgement	0	0	14.28
PM25-FIL	Engineering Judgement	0	0	0
CO	CEMS - Continuous Emission Monitoring	0	0	15.79
NOX	CEMS - Continuous Emission Monitoring	0	50	29.26
NH3	Engineering Judgement	0	0	6.62
PM-CON	Engineering Judgement	0	0	3.07

Process ID: 50305B Description: 3SPS - Duct Burner 6

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 240441 Million BTUs

Material: Process Gas

Stack: 503-05

Description: 3SPS - Blr 6

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
NH3	Engineering Judgement	0	0	0.44
NOX	CEMS - Continuous Emission Monitoring	0	0	1.93
7439921	Engineering Judgement	0	0	0.0001

Group ID: 003 Group Description: 3SPS

Percent Quarterly Throughput**Winter:** 25**Spring:** 25**Summer:** 25**Fall:** 25**Days Per Week:** 7**Weeks Per Year:** 52**Hours Per Day:** 24**Hours Per Year:** 8760**Process ID:** 50305B**Description:** 3SPS - Duct Burner 6**SCC:** 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200**Sulfur Content:** 0**Ash Content:** 0**Throughput:** 240441

Million BTUs

Material: Process Gas**Stack:** 503-05**Description:** 3SPS - Blr 6**Stack Type:** Vertical**Height:** 200**Diameter:** 10**Temperature:** 500**Velocity:** 25**Gas Flow:** 115000**Input/Output:** Process Material Used (Input)

<u>Pollutant</u>	<u>Estimation Method</u>	<u>Factor</u>	<u>Overall Control Efficiency</u>	<u>Emission (Tons)</u>
PM-CON	State/Local Speciation Profile	0	0	0.20
SO2	CEMS - Continuous Emission Monitoring	0	0	1.12
PM10-FIL	Engineering Judgement	0	0	0.95
PM25-FIL	Engineering Judgement	0	0	0
VOC	Engineering Judgement	0	0	0.07
CO	CEMS - Continuous Emission Monitoring	0	0	1.04



AES-01

AIR EMISSION STATEMENT CERTIFICATION

State Form 52052 (3-05)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

IDEM - Office of Air Quality
 Technical Support and Modeling Section - Mail Code 61-51
 100 N. Senate Avenue
 Indianapolis, IN 46204-2251
 Telephone: (317) 233-0178 or
 Toll Free: 1-800-451-6027 x30178 (within Indiana)
<http://www.emissions.IN.gov/>

Instructions:

This is a required form for each air emission statement as well as any modifications.

The certification supplied with a source's permit may be used in lieu of this form

"Responsible Official" has the same meaning as defined in 326 IAC (34), and is usually designated in the General Information section of the permit.

Part A: Contact Information

Part A is intended to provide basic information about the company submitting an Air Emission Statement and information on the Air Emission Statement preparer in case there is a question about the report.

1. Company Name: BP Products North America Inc Whiting R		2. Source ID: 1808900003
3. Mailing Address:		
City:	State:	ZIP Code:
4. Name of Emission Statement Preparer: Julie		Kendall
5. Title of Emission Statement Preparer(optional): Environmental Specialist		
6. Telephone Number: (219)-370-3131	7. Facsimile Number(optional):	
8. Electronic Mail Address (optional): julie.kendall@bp.com		

Part B: Emissions Summary

Part B is intended to aid in the review of data and to collect information about billable hazardous air pollutants

Emissions Statement Pollutants (Plant Wide)

	Tons Emitted
Ammonia(NH3)	54.4000
Carbon Monoxide (CO)	542.1000
Lead (PB)	0.0346
Nitrogen Dioxide (NO2)	1377.9800
Primary PM Condensable Only (All Less Than 1 Micron)(PM-CON)	362.8743
Primary PM10, Filterable Portion Only(PM10-FIL)	380.0743
Primary PM2.5, Filterable Portion Only(PM25-FIL)	194.8000
Sulfur Dioxide (SO2)	290.7429
Volatile Organic Compounds (VOC)	624.1481

Received
 State of Indiana
 JUL - 1 2019
 Dept of Environmental Management
 Office of Air Quality

Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)

	Tons Emitted
No Billable Hazardous Air Pollutants reported!	0.0000

Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparer and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

DONALD W. PORTER

Name of Responsible Official (typed or printed)

VP, BP Products NA

Title of Responsible Official

6/27/19

Date (month, day, year)

Signature of Responsible Official

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
 Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50301A Description: 3SPS - Blr 1

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2971505 Million BTUs

Material: Process Gas

Stack: 503-01
 Description: 3SPS - Blr 1
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM10-FIL	Engineering Judgement	0	0	14.86
PM-CON	Engineering Judgement	0	0	17.83
SO2	CEMS - Continuous Emission Monitoring	0	0	10.59
PM25-FIL	Engineering Judgement	0	0	0
CO	CEMS - Continuous Emission Monitoring	0	0	13.73
NOX	CEMS - Continuous Emission Monitoring	0	50	21.77
NH3	Engineering Judgement	0	0	5.47
VOC	Engineering Judgement	0	0	5.93
7439921	Engineering Judgement	0	0	0.0007

Process ID: 50301B Description: 3SPS - Duct Burner 1

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 219076 Million BTUs

Material: Process Gas

Stack: 503-01
 Description: 3SPS - Blr 1
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
SO2	Engineering Judgement	0	0	0.79
PM25-FIL	Engineering Judgement	0	0	0
VOC	Engineering Judgement	0	0	0.44
NH3	Engineering Judgement	0	0	0.40
7439921	Engineering Judgement	0	0	0.0001
NOX	Engineering Judgement	0	0	1.55
PM-CON	State/Local Speciation Profile	0	0	1.31
CO	Engineering Judgement	0	0	0.98
PM10-FIL	Engineering Judgement	0	0	1.10

Process ID: 50302A Description: 3SPS - Blr 2

SCC: 10200701
 Industrial
 Process Gas
 Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2797136 Million BTUs

Material: Process Gas

Stack: 503-02
 Description: 3SPS - Blr 2
 Stack Type: Vertical
 Height: 200
 Diameter: 10
 Temperature: 500
 Velocity: 25
 Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	14.96
PM-CON	Engineering Judgement	0	0	2.24
VOC	Engineering Judgement	0	0	2.03

Group ID: 503
Percent Quarterly Throughput

Winter: 25 Spring: 25 Summer: 25 Fall: 25
Days Per Week: 7 Weeks Per Year: 52 Hours Per Day: 24 Hours Per Year: 8760

Process ID: 50302A Description: 3SPS - Blr 2

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2797136 Million BTUs

Material: Process Gas

Stack: 503-02

Description: 3SPS - Blr 2

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
7439921	Engineering Judgement	0	0	0.0007
NH3	Engineering Judgement	0	0	5.14
PM25-FIL	Engineering Judgement	0	0	0
NOX	CEMS - Continuous Emission Monitoring	0	50	22.25
PM10-FIL	Engineering Judgement	0	0	6.57
SO2	CEMS - Continuous Emission Monitoring	0	0	10.59

Process ID: 50302B Description: 3SPS - Duct Burner 2

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 177290 Million BTUs

Material: Process Gas

Stack: 503-02

Description: 3SPS - Blr 2

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
NOX	CEMS - Continuous Emission Monitoring	0	0	1.35
PM-CON	State/Local Speciation Profile	0	0	0.14
CO	CEMS - Continuous Emission Monitoring	0	0	0.94
SO2	CEMS - Continuous Emission Monitoring	0	0	0.68
7439921	Engineering Judgement	0	0	0.0000
PM10-FIL	Engineering Judgement	0	0	0.42
VOC	Engineering Judgement	0	0	0.13
PM25-FIL	Engineering Judgement	0	0	0
NH3	Engineering Judgement	0	0	0.33

Process ID: 50303A Description: 3SPS - Blr 3

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3451532 Million BTUs

Material: Process Gas

Stack: 503-03

Description: 3SPS - Blr 3

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
SO2	CEMS - Continuous Emission Monitoring	0	0	13.07
NOX	CEMS - Continuous Emission Monitoring	0	50	26.49
PM10-FIL	Engineering Judgement	0	0	17.26
PM25-FIL	Engineering Judgement	0	0	0
VOC	Engineering Judgement	0	0	7.34
CO	CEMS - Continuous Emission Monitoring	0	0	17.69

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25

Spring: 25

Summer: 25

Fall: 25

Days Per Week: 7

Weeks Per Year: 52

Hours Per Day: 24

Hours Per Year: 8760

Process ID: 50303A Description: 3SPS - Blr 3

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3451532 Million BTUs

Material: Process Gas

Stack: 503-03

Description: 3SPS - Blr 3

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
NH3	Engineering Judgement	0	0	6.35
PM-CON	Engineering Judgement	0	0	20.71
7439921	Engineering Judgement	0	0	0.0008

Process ID: 50303B Description: 3SPS - Duct Burner 3

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 232132 Million BTUs

Material: Process Gas

Stack: 503-03

Description: 3SPS - Blr 3

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM25-FIL	Engineering Judgement	0	0	0
NOX	CEMS - Continuous Emission Monitoring	0	0	1.77
PM-CON	State/Local Speciation Profile	0	0	1.39
PM10-FIL	Engineering Judgement	0	0	1.16
VOC	Engineering Judgement	0	0	0.49
CO	CEMS - Continuous Emission Monitoring	0	0	1.18
SO2	CEMS - Continuous Emission Monitoring	0	0	0.88
7439921	Engineering Judgement	0	0	0.0001
NH3	Engineering Judgement	0	0	0.43

Process ID: 50304A Description: 3SPS - Blr 4

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 3548332 Million BTUs

Material: Process Gas

Stack: 503-04

Description: 3SPS - Blr 4

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM-CON	Engineering Judgement	0	0	21.29
VOC	Engineering Judgement	0	0	7.57
NOX	CEMS - Continuous Emission Monitoring	0	50	25.04
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0009
PM10-FIL	Engineering Judgement	0	0	17.74
CO	CEMS - Continuous Emission Monitoring	0	0	13.44
NH3	CEMS - Continuous Emission Monitoring	0	0	6.53
SO2	CEMS - Continuous Emission Monitoring	0	0	13.44

Group ID: 603 Group Description: 3SPS

Percent Quarterly Throughput

Winter: 25

Spring: 25

Summer: 25

Fall: 25

Days Per Week: 7

Weeks Per Year: 52

Hours Per Day: 24

Hours Per Year: 8760

Process ID: 50304B

Description: 3SPS - Duct Burner 4

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 241653

Million BTUs

Material: Process Gas

Stack: 503-04

Description: 3SPS - Blr 4

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
SO2	CEMS - Continuous Emission Monitoring	0	0	0.92
CO	CEMS - Continuous Emission Monitoring	0	0	0.90
PM10-FIL	Engineering Judgement	0	0	1.21
NOX	CEMS - Continuous Emission Monitoring	0	0	1.72
PM25-FIL	Engineering Judgement	0	0	0
7439921	Engineering Judgement	0	0	0.0001
PM-CON	State/Local Speciation Profile	0	0	1.45
NH3	Engineering Judgement	0	0	0.44
VOC	Engineering Judgement	0	0	0.51

Process ID: 50305A

Description: 3SPS - Blr 6

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 2908277

Million BTUs

Material: Process Gas

Stack: 503-05

Description: 3SPS - Blr 6

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
CO	CEMS - Continuous Emission Monitoring	0	0	13.09
PM-CON	Engineering Judgement	0	0	2.47
PM10-FIL	Engineering Judgement	0	0	11.49
VOC	Engineering Judgement	0	0	0.87
SO2	CEMS - Continuous Emission Monitoring	0	0	10.99
NH3	Engineering Judgement	0	0	5.36
7439921	Engineering Judgement	0	0	0.0007
PM25-FIL	Engineering Judgement	0	0	0
NOX	CEMS - Continuous Emission Monitoring	0	50	22.70

Process ID: 50305B

Description: 3SPS - Duct Burner 6

SCC: 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200

Sulfur Content: 0

Ash Content: 0

Throughput: 212457

Million BTUs

Material: Process Gas

Stack: 503-05

Description: 3SPS - Blr 6

Stack Type: Vertical

Height: 200

Diameter: 10

Temperature: 500

Velocity: 25

Gas Flow: 115000

Input/Output: Process Material Used (Input)

Pollutant	Estimation Method	Factor	Overall Control Efficiency	Emission (Tons)
PM25-FIL	Engineering Judgement	0	0	0
PM10-FIL	Engineering Judgement	0	0	0.84
CO	CEMS - Continuous Emission Monitoring	0	0	0.96

Group ID: 503 Group Description: 3SPS

Percent Quarterly Throughput**Winter:** 25**Spring:** 25**Summer:** 25**Fall:** 25**Days Per Week:** 7**Weeks Per Year:** 52**Hours Per Day:** 24**Hours Per Year:** 8760**Process ID:** 50305B**Description:** 3SPS - Duct Burner 6**SCC:** 10200701

Industrial

Process Gas

Petroleum Refinery Gas

Heat Content: 1200**Sulfur Content:** 0**Ash Content:** 0**Throughput:** 212457

Million BTUs

Material: Process Gas**Stack:** 503-05**Description:** 3SPS - Blr 6**Stack Type:** Vertical**Height:** 200**Diameter:** 10**Temperature:** 500**Velocity:** 25**Gas Flow:** 115000**Input/Output:** Process Material Used (Input)

<u>Pollutant</u>	<u>Estimation Method</u>	<u>Factor</u>	<u>Overall Control Efficiency</u>	<u>Emission (Tons)</u>
SO2	CEMS - Continuous Emission Monitoring	0	0	0.80
VOC	Engineering Judgement	0	0	0.06
7439921	Engineering Judgement	0	0	0.0001
NOX	CEMS - Continuous Emission Monitoring	0	0	1.60
NH3	Engineering Judgement	0	0	0.39
PM-CON	State/Local Speciation Profile	0	0	0.18

EXHIBIT 7

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Indianapolis**

OFFICE MEMORANDUM

To:	Rick Massoels	Date: January 10, 2019
From:	Thomas A. Kline <i>TAK</i>	Thru: Dave Cline <i>DA</i>
Subject:	BP Products North America Inc., Whiting Business Unit	
	Source ID: 089-00453	Permit Number: T089-38868-00453
	City: Whiting	County: Lake
	Protocol Reviewer: SLF	Field Observer: SLF
	Test Company: Mostardi Platt	

The Compliance Data Section has reviewed this report and found the sampling procedures used and results obtained to be acceptable to this office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test results.

Unit Tested: No. 3 Stanolind Power Station (SPS) – Unit ID 503 - #31 Boiler

Dates of tests: **October 8, 2018**

228496

Test Purpose: Compliance

Type of Fuel: Refinery gas

Pollution Control Equipment: none for particulate or VOC

Permitted APCD Parameters: none

APCD Parameters During Testing: n/a

Pollutants:	PM, PM10, Opacity, VOC
Test methods:	1-5, 9, 25A, 202

Maximum Operating Rate:	575 mmBtu/hr
Average Operating Rate During Test:	528 mmBtu/hr

PM Emission Limit:	0.012 lb/mmBtu (326 IAC 2-2)
PM Emission Rate:	0.0043 lb/mmBtu

PM10 Emission Limit:	0.03 gr/dscf (326 IAC 6.8-1-2)
PM10 Emission Rate:	0.009 gr/dscf

PM10 Emission Limit:	0.010 lb/mmBtu (326 IAC 2-2)
	0.0075 lb/mmBtu (326 IAC 6.8-2-6)
PM10 Emission Rate:	0.0043 lb/mmBtu (front half)
	0.0112 lb/mmBtu (back half)
	0.0155 lb/mmBtu (total)

PM10 Emission Limit:	4.28 lb/hr (326 IAC 6.8-2-6)
PM10 Emission Rate:	2.61 lb/hr (front half)
	6.73 lb/hr (back half)
	9.34 lb/hr (total)

Continued: Unit Tested: No. 3 Stanolind Power Station (SPS) – Unit ID 503 - #31 Boiler

Allowable Opacity: 20% (326 IAC 5-1-2)
Six Minute Opacity: 0%
Average Opacity: 0%

VOC Emission Limit: 0.0054 lb/mmBtu (326 IAC 2-2)
VOC Emission Rate: 0.00002 lb/mmBtu

Status: **In Compliance** for PM, Opacity, and VOC. **Out of Compliance for PM10.**

Unit Tested: No. 3 Stanolind Power Station (SPS) – Unit ID 503 - #32 Boiler

Dates of tests: **October 9, 2018**

Test Purpose: Compliance

Type of Fuel: Refinery gas

Pollution Control Equipment: none for particulate or VOC

Permitted APCD Parameters: none

APCD Parameters During Testing: n/a

Pollutants: PM, PM10, Opacity, VOC

Test methods: 1-5, 9, 25A, 202

208498

Maximum Operating Rate: 575 mmBtu/hr
Average Operating Rate During Test: 492 mmBtu/hr

PM Emission Limit: 0.012 lb/mmBtu (326 IAC 2-2)
PM Emission Rate: 0.0036 lb/mmBtu

PM10 Emission Limit: 0.03 gr/dscf (326 IAC 6.8-1-2)
PM10 Emission Rate: 0.01 gr/dscf

PM10 Emission Limit: 0.010 lb/mmBtu (326 IAC 2-2)
0.0075 lb/mmBtu (326 IAC 6.8-2-6)
PM10 Emission Rate: 0.0036 lb/mmBtu (front half)
0.0126 lb/mmBtu (back half)
0.0162 lb/mmBtu (total)

PM10 Emission Limit: 4.28 lb/hr (326 IAC 6.8-2-6)
PM10 Emission Rate: 2.23 lb/hr (front half)
7.78 lb/hr (back half)
10.01 lb/hr (total)

Allowable Opacity: 20% (326 IAC 5-1-2)
Six Minute Opacity: 0%
Average Opacity: 0%

VOC Emission Limit: 0.0054 lb/mmBtu (326 IAC 2-2)
VOC Emission Rate: 0.00002 lb/mmBtu

Status: **In Compliance** for PM, Opacity, and VOC. **Out of Compliance for PM10.**

Unit Tested: No. 3 Stanolind Power Station (SPS) – Unit ID 503 - #33 Boiler

228499

Dates of tests: **October 11, 2018**

Test Purpose: Compliance

Type of Fuel: Refinery gas

Pollution Control Equipment: none for particulate or VOC

Permitted APCD Parameters: none

APCD Parameters During Testing: n/a

Pollutants: PM, PM10, Opacity, VOC

Test methods: 1-5, 9, 25A, 202

Maximum Operating Rate: 575 mmBtu/hr

Average Operating Rate During Test: 517 mmBtu/hr

PM Emission Limit: 0.012 lb/mmBtu (326 IAC 2-2)

PM Emission Rate: 0.0053 lb/mmBtu

PM10 Emission Limit: 0.03 gr/dscf (326 IAC 6.8-1-2)

PM10 Emission Rate: 0.006 gr/dscf

PM10 Emission Limit: 0.010 lb/mmBtu (326 IAC 2-2)

0.0075 lb/mmBtu (326 IAC 6.8-2-6)

PM10 Emission Rate: 0.0053 lb/mmBtu (front half)

0.0098 lb/mmBtu (back half)

0.0151 lb/mmBtu (total)

PM10 Emission Limit: 4.28 lb/hr (326 IAC 6.8-2-6)

PM10 Emission Rate: 3.16 lb/hr (front half)

5.86 lb/hr (back half)

9.02 lb/hr (total)

Allowable Opacity: 20% (326 IAC 5-1-2)

Six Minute Opacity: 0%

Average Opacity: 0%

VOC Emission Limit: 0.0054 lb/mmBtu (326 IAC 2-2)

VOC Emission Rate: 0.00008 lb/mmBtu

Status: **In Compliance** for PM, Opacity, and VOC. **Out of Compliance** for PM10.

Unit Tested: No. 3 Stanolind Power Station (SPS) – Unit ID 503 - #34 Boiler

228500

Dates of tests: **October 12, 2018**

Test Purpose: Compliance

Type of Fuel: Refinery gas

Pollution Control Equipment: none for particulate or VOC

Permitted APCD Parameters: none

APCD Parameters During Testing: n/a

Pollutants: PM, PM10, Opacity, VOC

Test methods: 1-5, 9, 25A, 202

Maximum Operating Rate: 575 mmBtu/hr

Average Operating Rate During Test: 548 mmBtu/hr

PM Emission Limit: 0.012 lb/mmBtu (326 IAC 2-2)

PM Emission Rate: 0.0051 lb/mmBtu

PM10 Emission Limit: 0.03 gr/dscf (326 IAC 6.8-1-2)

PM10 Emission Rate: 0.007 gr/dscf

PM10 Emission Limit: 0.010 lb/mmBtu (326 IAC 2-2)

0.0075 lb/mmBtu (326 IAC 6.8-2-6)

PM10 Emission Rate: 0.0051 lb/mmBtu (front half)

0.0063 lb/mmBtu (back half)

0.0114 lb/mmBtu (total)

PM10 Emission Limit: 4.28 lb/hr (326 IAC 6.8-2-6)

PM10 Emission Rate: 3.30 lb/hr (front half)

4.08 lb/hr (back half)

7.38 lb/hr (total)

Allowable Opacity: 20% (326 IAC 5-1-2)

Six Minute Opacity: 0%

Average Opacity: 0%

VOC Emission Limit: 0.0054 lb/mmBtu (326 IAC 2-2)

VOC Emission Rate: 0.00004 lb/mmBtu

Status: **In Compliance** for PM, Opacity, and VOC. **Compliance Cannot be Determined for PM10.**

cc: Thomas Kline-Office of Air Quality



Compliance Emissions Test Report

BP Products North America, Inc.
Whiting Refinery
Boiler 31 Stack
Whiting, Indiana
October 8, 2018

Received
State of Indiana

NOV 26 2018
11-21
Dept of Environmental Management
State of Indiana

Report Submittal Date
November 8, 2018

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Project No. M184006A

3.0 TEST RESULT SUMMARIES

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: 3 SPS Boiler 31 Stack
 Test Method: 5/202

Source Condition	Normal	Normal	Normal	
Date	10/8/18	10/8/18	10/8/18	
Start Time	8:50	10:44	12:40	
End Time	10:05	12:11	13:54	
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	476.5	476.2	473.6	475.4
Flue Gas Moisture, percent by volume	15.0%	15.2%	15.0%	15.1%
Average Flue Pressure, in. Hg	29.38	29.32	29.38	29.36
Gas Sample Volume, dscf	57.430	57.859	56.892	57.394
Average Gas Velocity, ft/sec	86.799	87.622	86.348	86.923
Gas Volumetric Flow Rate, acfm	261,779	264,262	260,418	262,153
Gas Volumetric Flow Rate, dscfm	123,102	123,845	122,915	123,287
Gas Volumetric Flow Rate, scfm	144,910	146,055	144,600	145,188
Average %CO ₂ by volume, dry basis	7.7	7.7	7.9	7.8
Average %O ₂ by volume, dry basis	6.8	6.8	6.9	6.8
Isokinetic Variance	102.9	103.0	102.1	102.7
Calculated Fuel Factor Fd, dscf/mmBtu	8,252.7	8,250.1	8,247.7	8,250.2
Filterable Particulate Matter (Method 5)				
grams collected	0.01235	0.00756	0.00743	0.00911
grains/acf	0.0016	0.0009	0.0010	0.0012
grains/dscf	0.0033	0.0020	0.0020	0.0024
lb/hr	3.501	2.140	2.123	2.588
lb/mmBtu (Calculated Fd Factor)	0.0058	0.0035	0.0035	0.0043
Condensable Particulate Matter (Method 202)				
grams collected	0.02149	0.02395	0.02561	0.02368
grains/acf	0.0027	0.0030	0.0033	0.0030
grains/dscf	0.0058	0.0064	0.0069	0.0064
lb/hr	6.092	6.780	7.318	6.730
lb/mmBtu (Calculated Fd Factor)	0.0101	0.0112	0.0122	0.0112
Total Particulate Matter (5/202)				
grams collected	0.03384	0.03151	0.03304	0.03280
grains/acf	0.0043	0.0039	0.0043	0.0042
grains/dscf	0.0091	0.0084	0.0089	0.0088
lb/hr	9.593	8.920	9.441	9.318
lb/mmBtu (Calculated Fd Factor)	0.0159	0.0147	0.0157	0.0154



Compliance Emissions Test Report

BP Products North America, Inc.
Whiting Refinery
Boiler 32 Stack
Whiting, Indiana
October 9, 2018

Received
State of Indiana

NOV 26 2018
1121
Dept of Environmental Management
State of Indiana

Report Submittal Date
November 8, 2018

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Project No. M184006B

3.0 TEST RESULT SUMMARIES

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: 3 SPS Boiler 32 Stack
 Test Method: 5/202

	Source Condition	Normal	Normal	Normal
	Date	10/9/18	10/9/18	10/9/18
	Start Time	8:15	9:55	11:35
	End Time	9:29	11:10	12:49
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	437.5	436.8	437.1	437.1
Flue Gas Moisture, percent by volume	15.8%	16.0%	16.0%	15.9%
Average Flue Pressure, in. Hg	29.22	29.22	29.22	29.22
Gas Sample Volume, dscf	54.563	54.928	55.452	54.981
Average Gas Velocity, ft/sec	80.094	81.270	80.421	80.595
Gas Volumetric Flow Rate, acfm	241,558	245,105	242,545	243,069
Gas Volumetric Flow Rate, dscfm	116,865	118,401	117,124	117,463
Gas Volumetric Flow Rate, scfm	138,807	140,950	139,438	139,732
Average %CO ₂ by volume, dry basis	8.5	8.5	8.4	8.5
Average %O ₂ by volume, dry basis	5.9	5.9	5.9	5.9
Isokinetic Variance	103.0	102.3	104.4	103.2
Calculated Fuel Factor Fd, dscf/mmBtu	8,228.5	8,226.4	8,224.1	8,226.3
Filterable Particulate Matter (Method 5)				
grams collected	0.00861	0.00900	0.00605	0.00789
grains/acf	0.0012	0.0012	0.0008	0.0011
grains/dscf	0.0024	0.0025	0.0017	0.0022
lb/hr	2.439	2.566	1.690	2.232
lb/mmBtu (Calculated Fd Factor)	0.0040	0.0041	0.0028	0.0036
Condensable Particulate Matter (Method 202)				
grams collected	0.02958	0.02542	0.02751	0.02750
grains/acf	0.0040	0.0034	0.0037	0.0037
grains/dscf	0.0084	0.0071	0.0077	0.0077
lb/hr	8.379	7.247	7.685	7.770
lb/mmBtu (Calculated Fd Factor)	0.0137	0.0117	0.0125	0.0126
Total Particulate Matter (5/202)				
grams collected	0.03819	0.03442	0.03356	0.03539
grains/acf	0.0052	0.0046	0.0045	0.0048
grains/dscf	0.0108	0.0096	0.0094	0.0099
lb/hr	10.818	9.813	9.375	10.002
lb/mmBtu (Calculated Fd Factor)	0.0177	0.0158	0.0153	0.0163



Compliance Emissions Test Report

BP Products North America, Inc.
Whiting Refinery
Boiler 33 Stack
Whiting, Indiana
October 11, 2018

Received
State of Indiana

NOV 26 2018
11-21
Dept of Environmental Management
State of Indiana

Report Submittal Date
November 8, 2018

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Project No. M184006C

888 Industrial Drive
Elmhurst, Illinois 60126
630-993-2100

3.0 TEST RESULT SUMMARIES

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: 3 SPS **Boiler 33 Stack**
 Test Method: 5/202

	Source Condition	Normal	Normal	Normal	Normal	
	Date	10/11/18	10/11/18	10/11/18	10/11/18	
	Start Time	8:25	10:07	12:40	14:34	
	End Time	9:40	11:22	13:55	15:49	Runs 1, 2, and 4
	Run 1	Run 2	Run 3	Run 4	Average	
Stack Conditions						
Average Gas Temperature, °F	483.4	483.1	483.0	485.1	483.9	
Flue Gas Moisture, percent by volume	14.4%	13.1%	14.3%	13.9%	13.8%	
Average Flue Pressure, in. Hg	29.09	29.09	29.09	29.09	29.09	
Gas Sample Volume, dscf	56.715	56.83	57.952	57.914	57.153	
Average Gas Velocity, ft/sec	86.772	87.530	89.364	88.770	87.691	
Gas Volumetric Flow Rate, acfm	261,697	263,985	269,515	267,723	264,468	
Gas Volumetric Flow Rate, dscfm	121,937	124,922	125,773	125,197	124,019	
Gas Volumetric Flow Rate, scfm	142,393	143,682	146,718	145,408	143,828	
Average %CO ₂ by volume, dry basis	8.2	7.2	8.0	8.2	7.9	
Average %O ₂ by volume, dry basis	6.4	8.2	6.5	6.6	7.1	
Isokinetic Variance	102.6	100.3	101.6	102.0	101.6	
Calculated Fuel Factor Fd, dscf/mmBtu	8,249.7	8,246.6	8,268.4	8,277.8	8,258.0	
Filterable Particulate Matter (Method 5)						
grams collected	0.01146	0.00998	0.01069	0.01157	0.01100	
grains/acf	0.0015	0.0013	0.0013	0.0014	0.0014	
grains/dscf	0.0031	0.0027	0.0028	0.0031	0.0030	
lb/hr	3.259	2.901	3.068	3.308	3.156	
lb/mmBtu (Calculated Fd Factor)	0.0053	0.0053	0.0049	0.0053	0.0053	
Condensable Particulate Matter (Method 202)						
grams collected	0.02125	0.01836	0.05326	0.02160	0.02040	
grains/acf	0.0027	0.0024	0.0066	0.0027	0.0026	
grains/dscf	0.0058	0.0050	0.0142	0.0058	0.0055	
lb/hr	6.042	5.338	15.288	6.180	5.853	
lb/mmBtu (Calculated Fd Factor)	0.0098	0.0097	0.0243	0.0099	0.0098	
Total Particulate Matter (5/202)						
grams collected	0.03271	0.02834	0.06395	0.03320	0.03142	
grains/acf	0.0042	0.0037	0.0079	0.0041	0.0040	
grains/dscf	0.0089	0.0077	0.0170	0.0089	0.0085	
lb/hr	9.301	8.239	18.356	9.488	9.009	
lb/mmBtu (Calculated Fd Factor)	0.0151	0.0150	0.0292	0.0152	0.0151	

1.0 EXECUTIVE SUMMARY

MOSTARDI PLATT conducted a compliance emissions test program for BP Products North America, Inc. on October 12, 2018 at the Whiting Refinery in Whiting, Indiana on the Boiler 34 Stack. This report summarizes the results of the test program and test methods used.

The test location, test dates, and test parameters are summarized below.

TEST INFORMATION		
Test Location	Test Date	Test Parameters
Boiler 34 Stack	October 12, 2018	Filterable Particulate Matter (FPM), Condensable Particulate Matter (CPM), Total Particulate Matter (TPM), Volatile Organic Compounds (VOC), and Visible Emissions

The purpose of the test program was to demonstrate the above test parameter emissions during normal operating conditions to satisfy the regulatory permit limits. Selected results of the test program are summarized below. A complete summary of emission test results follows the narrative portion of this report.

TEST RESULTS			
Test Location	Test Parameter	Emission Limits	Emission Rate
Boiler 34 Stack	PM ₁₀ (as TPM)	0.010 lb/mmBtu	0.0051 lb/mmBtu
	TPM	0.012 lb/mmBtu	0.0114 lb/mmBtu
	VOC	0.0054 lb/mmBtu	0.00004 lb/mmBtu
	VE	20%	0%

Emissions on lb/mmBtu basis were determined by using a calculated F_d Factors supplied by the plant for each test run. All of the filterable and condensable particulate matter were considered to be PM₁₀. Operating data as provided by BP Products North America, Inc. are included in Appendix A.

The identifications of individuals associated with the test program are summarized below.

TEST PERSONNEL INFORMATION		
Location	Address	Contact
Test Facility	BP Products North America, Inc. Whiting Refinery 2815 Indianapolis Boulevard Whiting, Indiana 46394	Mr. Paul Drayton Environmental Specialist (219) 370-8084 (phone) Paul.Drayton@bp.com
Testing Company Representative	Mostardi Platt 888 Industrial Drive Elmhurst, Illinois 60126	Mr. Stuart L. Burton Senior Project Manager (630) 993-2100 (phone) sburton@mp-mail.com

The test crew consisted of Messrs. B. Collins, B. Garcia, C. Buglio, C. Eldridge, C. Trezak, P. Coleman, and S. Burton of Mostardi Platt.

3.0 TEST RESULT SUMMARIES

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: 3 SPS Boiler 34 Stack
 Test Method: 5/202

	Source Condition	Normal	Normal	Normal
	Date	10/12/18	10/12/18	10/12/18
	Start Time	7:48	9:26	11:00
	End Time	9:02	10:39	12:13
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	482.5	480.5	482.8	481.9
Flue Gas Moisture, percent by volume	14.2%	14.1%	14.2%	14.2%
Average Flue Pressure, in. Hg	29.20	29.20	29.20	29.20
Gas Sample Volume, dscf	56.525	56.841	57.361	56.909
Average Gas Velocity, ft/sec	87.301	88.097	88.099	87.832
Gas Volumetric Flow Rate, acfm	263,294	265,694	265,700	264,896
Gas Volumetric Flow Rate, dscfm	123,573	125,044	124,528	124,382
Gas Volumetric Flow Rate, scfm	143,950	145,570	145,214	144,911
Average %CO ₂ by volume, dry basis	8.7	8.1	8.6	8.5
Average %O ₂ by volume, dry basis	5.7	6.5	6.0	6.1
Isokinetic Variance	100.9	100.2	101.6	100.9
Calculated Fuel Factor Fd, dscf/mmBtu	8,269.6	8,257.0	8,268.1	8,264.9
Filterable Particulate Matter (Method 5)				
grams collected	0.01972	0.00792	0.00660	0.01141
grains/acf	0.0025	0.0010	0.0008	0.0014
grains/dscf	0.0054	0.0021	0.0018	0.0031
lb/hr	5.702	2.304	1.895	3.300
lb/mmBtu (Calculated Fd Factor)	0.0087	0.0037	0.0029	0.0051
Condensable Particulate Matter (Method 202)				
grams collected	0.01137	0.01278	0.01818	0.01411
grains/acf	0.0015	0.0016	0.0023	0.0018
grains/dscf	0.0031	0.0035	0.0049	0.0038
lb/hr	3.287	3.718	5.220	4.075
lb/mmBtu (Calculated Fd Factor)	0.0050	0.0059	0.0081	0.0063
Total Particulate Matter (5/202)				
grams collected	0.03109	0.02070	0.02478	0.02552
grains/acf	0.0040	0.0026	0.0031	0.0032
grains/dscf	0.0085	0.0056	0.0067	0.0069
lb/hr	8.989	6.022	7.115	7.375
lb/mmBtu (Calculated Fd Factor)	0.0137	0.0096	0.0110	0.0114

EXHIBIT 8



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

Northwest Regional Office • 330 W. US Highway 30, Suite F • Valparaiso, IN 46385

(888) 209-8892 • (219) 464-0233 • Fax (219) 464-0553 • www.idem.IN.gov

Michael R. Pence
GovernorCarol S. Comer
Commissioner

April 8, 2016

VIA CERTIFIED MAIL 7190 0005 2710 0048 1542Linda Wilson
BP Products North America, Inc.
2815 Indianapolis Boulevard
Whiting, Indiana 46394RE: Enforcement Referral
BP Products North America, Inc.
T089-35729-00453
Whiting, Indiana – Lake County

Dear Ms. Wilson:

A review of the results of compliance testing conducted at BP Products North America, Inc., on August 3 and 5, 2015 was completed by the Office of Air Quality. This review showed that PM₁₀ emissions from the No. 3 Stanolind Power Station Boiler #32 and Boiler #36 exceeded the limitations set forth in Permit T089-35729-00453, as described below, in violation of Permit Conditions D.24.1 and D.24.4(b)(3), 326 IAC 6.8-2-6, and 326-IAC 2-2.

Boiler #32
August 3, 2015

Allowable PM ₁₀ Emissions:	0.0075 lb/MMBtu	
Averaged PM ₁₀ Emissions:	0.0171 lb/MMBtu	326 IAC 6.8-2-6/ D.24.1
Allowable PM ₁₀ Emissions:	0.010 lb/MMBtu	
Averaged PM ₁₀ Emissions:	0.0171 lb/MMBtu	326 IAC 2-2/ D.24.4(b)(3)
Allowable PM ₁₀ Emissions:	4.28 lb/hr	
Averaged PM ₁₀ Emissions:	10.33 lb/hr	326 IAC 6.8-2-6/ D.24.1

Boiler #36
August 5, 2015

Allowable PM ₁₀ Emissions:	0.0075 lb/MMBtu	
Averaged PM ₁₀ Emissions:	0.0151 lb/MMBtu	326 IAC 6.8-2-6/ D.24.1
Allowable PM ₁₀ Emissions:	0.010 lb/MMBtu	
Averaged PM ₁₀ Emissions:	0.0151 lb/MMBtu	326 IAC 2-2/ D.24.4(b)(3)
Allowable PM ₁₀ Emissions:	4.28 lb/hr	
Averaged PM ₁₀ Emissions:	9.42 lb/hr	326 IAC 6.8-2-6/ D.24.1

This matter will be processed as an enforcement case for appropriate action. IDEM would like to take this opportunity to encourage discussions concerning the facts of the case, any additional information that may be available, and to provide you with information concerning the enforcement process.

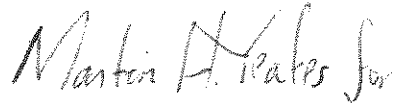
To discuss this matter or schedule an informational meeting concerning this matter, please contact Kevin Sokolowski at 219-781-4262 – direct and 888-209-8892 or ksokolow@idem.in.gov fifteen (15) days after receipt of this letter.



A State that Works

Please note Section C.19 in your T089-35729-00453 Operating Permit, Actions Related to Noncompliance Demonstrated by a Stack Test, requires a retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Pursuant to 326 IAC 3-6-2, a test protocol form shall be submitted thirty-five (35) days prior to the intended test date.

Sincerely,

A handwritten signature in dark ink, appearing to read "Rick Massoels", is written over a light blue horizontal line.

Rick Massoels, Deputy Director
Northwest Regional Office
IDEM

ACES No. 195022, 195401

RGM:ska
cc: Kale Popp - Compliance Data Section
Kevin Sokolowski – Northwest Regional Office

EXHIBIT 9

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

OFFICE MEMORANDUM

To: Rick Massoels
From: Doug Van Demark

Date: July 25, 2016
Through: Dave Cline *DC*

Subject: BP Products North America, Inc.
Source ID:
City:
Protocol Reviewer:
Test Company:

89 453
Whiting
KP
ARI Environmental, Inc.

Permit #: 30396
County: Lake
Observer: KP

The Compliance Data Section has reviewed this report and found the sampling procedures used and results obtained to be acceptable to this office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test.

Date of Test: October 20, 2015
Unit Tested: No. 3 Stanolind Power Station (3SPS) Boiler #32 & associated duct burner - 190630
Test Purpose: Compliance
Type of Fuel: Refinery Gas
Air Pollution Control Device (APCD): Selective Catalytic Reduction (SCR) system exhausting to Stack 503-02
APCD Permitted Parameters: N/A
Maximum Operating Rate: 575 mmbtu/hr
Average During Test: 356.4667 mmbtu/hr
Test Methods: 1-4, 5, 9 & 202

Pollutant: PM (filterable) Method 5
Permit Condition: D.24.2 326 IAC 6.8-1-2
Permitted Limits: 0.03 gr/dscf
Average Measured Emissions: 0.000361 gr/dscf
STATUS: In Compliance with permitted emission limits at 62% of the permitted maximum rate.

Permit Condition: D.24.4(b)(2) 326 IAC 2-2
Permitted Limits: 0.012 lb/mmbtu (duct burner limitation)
Average Measured Emissions: 0.000653 lb/mmbtu (duct burner limitation)
STATUS: In Compliance with permitted emission limits at 62% of the permitted maximum rate.

Pollutant: PM10* (filterable & condensable) Method 5 & 202
Permit Condition: D.24.1 326 IAC 6.8-2-6
Permitted Limits: 0.0075 lbs/mmbtu
4.28 lbs/hr
Average Measured Emissions: 0.0177 lbs/mmbtu
10.01 lbs/hr
STATUS: Out of compliance with permitted emission limits at 62% of the permitted maximum rate.

Permit Condition: D.24.4(b)(3) 326 IAC 2-2
Permitted Limits: 0.01 lbs/mmbtu
Average Measured Emissions: Run 1 Method 5 only 0.000851 lbs/mmbtu
Run 2 Method 5 only 0.000626 lbs/mmbtu
Run 3 Method 5 only 0.000483 lbs/mmbtu
Average Method 5 only 0.000653 lbs/mmbtu

Run 1 Method 202 only 0.016724 lbs/mmbtu
Run 2 Method 202 only 0.01350 lbs/mmbtu
Run 3 Method 202 only 0.021024 lbs/mmbtu
Average Method 202 only 0.017083 lbs/mmbtu

Run 1 PM10 (5 & 202) 0.017574 lbs/mmbtu
Run 2 PM10 (5 & 202) 0.014129 lbs/mmbtu
Run 3 PM10 (5 & 202) 0.021507 lbs/mmbtu
Average PM10 (5 & 202) 0.017737 lbs/mmbtu

STATUS: Out of compliance based on condensable PM only with permitted emission limits at 62% of the permitted maximum rate.

Pollutant	Opacity
Permit Condition:	C.2 326 IAC 5-1
Permitted Limits:	30%
Average Measured Emissions:	0%
STATUS:	In Compliance with permitted emission limits at 62% of the permitted maximum rate.

*Note: The PM10 Lake County SIP limit includes both filterable and condensable PM10. The condensable PM10 (M202) emissions alone were above the PM10 emission limits.

**Note: Emissions were sampled from Stack 503-02 after the addition of the duct burner emissions. Boiler #32 326 IAC 6.8-2-6 PM10 limits are independent of the duct burner emissions. By using this approach it is not possible to isolate emissions from either source in order to determine compliance with applicable limits of either source.

TEST REPORT

COMPLIANCE EMISSION TEST POWER STATION NO. 3 - **BOILER 32 STACK**

BP PRODUCTS NORTH AMERICA, INC.
WHITING, INDIANA

PREPARED FOR:

BP PRODUCTS NORTH AMERICA, INC.

Whiting Refinery
2918 Indianapolis Blvd.
Whiting, Indiana 46394
E-mail: kenard.taylor@bp.com
Attention: Mr. Ken Taylor

ARI Project No. 566-178
ARI Proposal No. 36415
BP Purchase Order No. 3000463136
Test Date: October 20, 2015
Report Issuance Date: November 16, 2015



ARI Environmental, Inc.
951 Old Rand Road, Unit 106
Wauconda, Illinois 60084
Phone: 847.487.1580 Ext. 117
Fax: 847.487.1587
E-mail: sflaherty@montrose-env.com
Steve Flaherty
Senior Project Manager
Source Testing Division

**SECTION FOUR****Test Results****TABLE 4-1. POWER STATION NO. 3 - BOILER 32 STACK PM TEST RESULTS**

TEST RUN NO.	1	2	3	
TEST DATE	10/20/2015	10/20/2015	10/20/2015	
TEST TIME	10:58 - 12:55	13:55 - 15:35	16:23 - 17:58	Average
Process Data				
Boiler steam load, 1,000 lb/hr	356.8	358.5	354.1	356.5
Stack Gas Parameters				
Temperature, av. °F	370.3	368.7	369.2	369.4
Velocity, av. ft/sec	73.651	71.767	70.416	71.945
Volume flow, acfm	222,127	216,444	212,370	216,980
Volume flow, scfm	138,694	135,407	132,789	135,630
Volume flow, dscfm	119,729	116,852	116,114	117,565
Volume flow, scfh	8,321,670	8,124,430	7,967,322	8,137,807
Volume flow, dscfh	7,183,733	7,011,104	6,966,856	7,053,898
Moisture, av. % vol	13.67	13.70	12.56	13.31
CO ₂ , av. % vol, db	8.0	8.3	8.5	8.3
O ₂ , av. % vol, db	7.5	7.0	6.8	7.1
Sample Train Data				
Time, min.	90.0	90.0	90.0	
Volume, dscf	58.866	57.209	56.279	
Volume, dscm	1.667	1.620	1.594	
Isokinetic ratio, %	99.5	99.0	98.0	
Particulate Matter				
Filterable PM collected, mg	1.75	1.30	1.00	1.35
Concentration				
gr/dscf	0.0005	0.0004	0.0003	0.0004
lb/dscf x 10 ⁻⁶	0.0656	0.0501	0.0392	0.0516
Emission rate				
lb/hr	0.471	0.351	0.273	0.365
Condensable PM collected, mg	34.41	28.03	43.56	35.33
Concentration				
gr/dscf	0.0090	0.0076	0.0119	0.0095
lb/dscf x 10 ⁻⁶	1.2890	1.0803	1.7066	1.3586
Emission rate				
lb/hr	9.257	7.572	11.886	9.572
Total PM collected, mg	36.16	29.33	44.56	36.68
Concentration				
gr/dscf	0.0095	0.0079	0.0122	0.0099
lb/dscf x 10 ⁻⁶	1.3546	1.1304	1.7458	1.4103
Emission rate				
lb/hr	9.728	7.923	12.159	9.937
lb/MMBtu	0.0176	0.0141	0.0214	0.0177
Visible Emissions				
Opacity, %	0	0	0	0

EXHIBIT 10

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

OFFICE MEMORANDUM

To: Rick Massoels Date: June 1, 2016
From: Luke Boyer *LB* Thru: Dave Cline *PAU*
Subject: BP Whiting
Source ID: T089-00453 Permit Number: T089-35729-00453
City: Whiting County: Lake
Protocol Reviewer: H.D.Vandermark Field Observer: N/A
Test Company: Clean Air Engineering, Inc

The Compliance Data Section has reviewed this report and found the sampling procedures used and results obtained to be acceptable to this office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test results.

Unit Tested: Stanolind Power Station Boiler #32-192381

Dates of tests: January 28, 2016
Test Purpose: Permit Required
Type of Fuel: N/A
Pollution Control Equipment: Selective Catalytic Reduction
Permitted APCD Parameters: No Requirement
APCD Parameters during Testing: N/A

Maximum Operating Rate: 575 MMBtu/hr
Average During Tests: 455 MMBtu/hr

Pollutants: Opacity, PM-10
Test methods: 1-4, 5, 9, 202

		0.010 lb/MMBtu (326 IAC 2-2)
PM-10 Limit:	4.28 lb/hr (326 IAC 6.8-2-6)	0.0075 lb/MMBtu (326 IAC 6.8-2-6)
PM-10 Emission Rate:	10.22 lb/hr	0.02218 lb/MMBtu
	10.07 lb/hr	0.02384 lb/MMBtu
	10.95 lb/hr	0.02354 lb/MMBtu
	10.41 lb/hr (Average)	0.02318 lb/MMBtu (Average)

Allowable Opacity: 20% (326 IAC 5-1)
Average Opacity: 0%
Highest 6-Minute Opacity: 0%

STATUS: **Out of Compliance** (at 79 % maximum permitted capacity)*

*Note: According to (326 IAC 6.8-2-6) PM-10 includes filterable and condensable results. Total emissions exceeded the limit as well as the condensable emissions when taken alone. Source is aware of results and is doing diagnostic testing to see if these were actual condensables or artifacts that formed after testing. Source is planning on retesting but has not picked a date.

cc: L.Boyer , IDEM
IDEM Central File Room

CleanAir Engineering
500 W. Wood Street
Palatine, IL 60067-4975
800-627-0033
www.cleanair.com



BP Whiting
2185 Indianapolis Blvd
Whiting, IN 46394

REPORT ON PARTICULATE TESTING

Performed for:
BP WHITING
BOILER 32
WHITING, IN

Client Reference No: 3000490168
CleanAir Project No: 12917
Revision 0: March 8, 2016

To the best of our knowledge, the data presented in this report are accurate, complete, error free and representative of the actual emissions during the test program. Clean Air Engineering operates in conformance with the requirements of ASTM D7036-04 Standard Practice for Competence of Air Emission Testing Bodies.

Submitted by,

Jaci Amundsen
Project Engineer
jamundsen@cleanair.com
847-654-4521

Reviewed by,

Ken Sullivan
Project Engineer
ksullivan@cleanair.com
847-654-4527

BP WHITING
WHITING, IN

Client Reference No: 3000490168
CleanAir Project No: 12917

RESULTS

2-1

Table 2-1:
Stack – FPM / CPM / TPM

Run No.	2	3	4	Average
Date (2016)	Jan 28	Jan 28	Jan 28	
Start Time (approx.)	11:46	13:35	15:27	
Stop Time (approx.)	12:50	14:39	16:31	
Process Conditions				
F _d Oxygen-based F-factor (dscf/MMBtu)	8,336	8,331	8,337	8,334
H _i Actual heat input (MMBtu/hr)	491	471	501	488
Gas Conditions				
O ₂ Oxygen (dry volume %)	7.8	8.1	8.1	8.0
CO ₂ Carbon dioxide (dry volume %)	7.4	7.3	7.2	7.3
T _s Sample temperature (°F)	424	424	424	424
B _w Actual water vapor in gas (% by volume)	12.2	12.1	12.0	12.1
Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	248,000	238,000	255,000	247,000
Q _s Volumetric flow rate, standard (scfm)	143,000	138,000	148,000	143,000
Q _{std} Volumetric flow rate, dry standard (dscfm)	126,000	121,000	130,000	126,000
Sampling Data				
V _{mstd} Volume metered, standard (dscf)	44.62	42.54	44.68	43.94
%I Isokinetic sampling (%)	104.6	103.7	101.3	103.2
Laboratory Data				
m _n Total FPM (g)	0.00307	0.00259	0.00213	
m _{CPM} Total CPM (g)	0.02570	0.02621	0.02774	
m _{Part} Total particulate matter (g)	0.02876	0.02880	0.02987	
DLC Detection level classification	ADL	ADL	ADL	
FPM Results				
C _{sd} Particulate Concentration (lb/dscf)	1.52E-07	1.34E-07	1.05E-07	1.30E-07
C _{sd} Particulate Concentration (gr/dscf)	0.00106	0.000939	0.000734	0.000911
E _{lb/hr} Particulate Rate (lb/hr)	1.15	0.974	0.819	0.980
E _{Fd} Particulate Rate - F _d -based (lb/MMBtu)	0.00202	0.00182	0.00143	0.00176
E _{Hi} Particulate Rate - Heat Input-based (lb/MMBtu)	0.00233	0.00207	0.00163	0.00201
CPM Results				
C _{sd} Particulate Concentration (lb/dscf)	1.27E-06	1.36E-06	1.37E-06	1.33E-06
C _{sd} Particulate Concentration (gr/dscf)	0.00889	0.00951	0.00958	0.00932
E _{lb/hr} Particulate Rate (lb/hr)	9.59	9.87	10.7	10.0
E _{Fd} Particulate Rate - F _d -based (lb/MMBtu)	0.0169	0.0185	0.0186	0.0180
E _{Hi} Particulate Rate - Heat Input-based (lb/MMBtu)	0.0195	0.0210	0.0213	0.0206
Total Particulate Matter Results				
C _{sd} Particulate Concentration (lb/dscf)	1.42E-06	1.49E-06	1.47E-06	1.46E-06
C _{sd} Particulate Concentration (gr/dscf)	0.00995	0.0104	0.0103	0.0102
E _{lb/hr} Particulate Rate (lb/hr)	10.7	10.8	11.5	11.0
E _{Fd} Particulate Rate - F _d -based (lb/MMBtu)	0.0189	0.0203	0.0201	0.0198
E _{Hi} Particulate Rate - Heat Input-based (lb/MMBtu)	0.0219	0.0230	0.0230	0.0226

Average includes 3 runs.

Detection level classifications are defined as follows:

ADL = Above Detection Level - all fractions are above detection limit

020516 152821

EXHIBIT 11

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Indianapolis

OFFICE MEMORANDUM

To: Rick Massoels
From: Kale Popp *KP* Date: September 18, 2017
Thru: Dave Cline *DC*
Subject: BP Products North America
Source ID: 089-00453 Permit Number: #38381
City: Whiting County: Lake
Protocol Reviewer: NONE Field Observer: NONE

The Compliance Data Section has reviewed this report and found the sampling procedures used and results obtained to be acceptable to this office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test results.

Unit Tested: No. 3 Stanolind Power Station **Boiler #32** *207186*
Dates of tests: **November 1-2, 2016**
Test Purpose: Compliance
Type of Fuel: Refinery Fuel Gas
Pollution Control Equipment: Selective Catalytic Reduction
Permitted APCD Parameters: NONE
APCD Parameters during test: NONE

Pollutants: PM, PM10, Sulfate PM, Opacity
Test methods: 1-4, 5/202, 8A, 9

Maximum Operating Rate: 575 MMBtu/hr
Average Operating Rate During Test: 456.36 MMBtu/hr
Permitted PM: 0.012 lb/MMBtu [326 IAC 2-2]
0.03 gr/dscf [326 IAC 6.8-1-2]
Tested PM: 0.0016 lb/MMBtu
0.001 gr/dscf

Permitted PM10:		0.010 lb/MMBtu [326 IAC 2-2]
	Total	0.0075 lb/MMBtu [326 IAC 6.8-2-6]
	Total	4.28 lb/hr [326 IAC 6.8-2-6]

why not viol?

Tested PM10:	Condensable	0.010 lb/MMBtu
	Total	0.012 lb/MMBtu
	Total	7.13 lb/hr

Permitted Opacity: 20% [326 IAC 5-1]
Tested Opacity: 0%

→ PSD

STATUS: In Compliance for PM and Opacity, **Cannot Be Determined for PM10**,
Out of Compliance for PM10 (at 79% maximum permitted capacity)

NOTE: Method 8A was conducted to test for sulfate condensable PM. In the submitted report the sulfates were deducted from the condensable PM weights. The sulfate condensable PM was deemed as a portion of the condensable PM and therefore was not deducted from the results within my review of the report. State rule 326 IAC 6.8-2-6 applies to the sum of filterable and condensable particulate matter.

Unit Tested: No. 3 Stanolind Power Station Boiler #36

207187

Dates of tests: November 2-3, 2016

Test Purpose: Compliance

Type of Fuel: Refinery Fuel Gas

Pollution Control Equipment: Selective Catalytic Reduction

Permitted APCD Parameters: NONE

APCD Parameters during test: NONE

Pollutants: PM, PM10, Sulfate PM, Opacity

Test methods: 1-4, 5/202, 8A, 9

Maximum Operating Rate:	575 MMBtu/hr
Average Operating Rate During Test:	466.87 MMBtu/hr
Permitted PM:	0.012 lb/MMBtu [326 IAC 2-2] 0.03 gr/dscf [326 IAC 6.8-1-2]
Tested PM:	0.00095 lb/MMBtu 0.001 gr/dscf

Permitted PM10:	0.010 lb/MMBtu [326 IAC 2-2]
Total	0.0075 lb/MMBtu [326 IAC 6.8-2-6]
Total	4.28 lb/hr [326 IAC 6.8-2-6]

Tested PM10:	Condensable 0.020 lb/MMBtu
	Total 0.021 lb/MMBtu
	Total 12.95 lb/hr

Permitted Opacity:	20% [326 IAC 5-1]
--------------------	-------------------

Tested Opacity:	0%
-----------------	----

STATUS: In Compliance for PM and Opacity, Out of Compliance for PM10
(at 81% maximum permitted capacity)

NOTE: Method 8A was conducted to test for sulfate condensable PM. In the submitted report the sulfates were deducted from the condensable PM weights. The sulfate condensable PM was deemed as a portion of the condensable PM and therefore was not deducted from the results within my review of the report. State rule 326 IAC 6.8-2-6 applies to the sum of filterable and condensable particulate matter.

cc: K. Popp, IDEM

IDEM Central File Room



Compliance Emissions Test Report

**BP Products North America, Inc.
Whiting Refinery
Boiler 32 Stack and Boiler 36 Stack
Whiting, Indiana
November 1 through 3, 2016**

**Report Submittal Date
December 28, 2016**

Received
State of Indiana

JAN 03 2017
1-2
Dept of Environmental Management
State of Indiana

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Mostardi Platt

Project No. M164405

3.0 TEST RESULT SUMMARIES

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: **Boiler 32 Stack**
 Test Method: 5/202/8A

	Source Condition	Normal	Normal	Normal	Normal
	Date	11/1/16	11/1/16	11/1/16	11/2/16
	Start Time	9:20	11:22	13:30	8:20
	End Time	10:57	12:59	15:07	9:57
	Run 1	Run 2	Run 3	Run 4	Average
Stack Conditions					
Average Gas Temperature, °F	449.0	447.6	450.7	448.4	448.9
Flue Gas Moisture, percent by volume	14.3%	14.1%	14.6%	13.7%	14.2%
Average Flue Pressure, in. Hg	29.01	29.01	29.01	29.27	29.08
Gas Sample Volume, dscf	71.916	72.404	71.388	73.580	72.322
Average Gas Velocity, ft/sec	80.519	81.737	80.270	81.461	80.997
Gas Volumetric Flow Rate, acfm	242,840	246,513	242,088	245,681	244,281
Gas Volumetric Flow Rate, dscfm	117,230	119,511	116,163	120,535	118,360
Gas Volumetric Flow Rate, scfm	136,770	139,056	136,097	139,701	137,906
Average %CO ₂ by volume, dry basis	8.4	8.3	8.2	8.1	8.3
Average %O ₂ by volume, dry basis	6.4	6.4	6.5	6.6	6.5
Isokinetic Variance	103.2	101.9	103.3	102.7	102.8
Calculated Fuel Factor Fd, dscf/mmBtu	8,263.0	8,262.0	8,259.0	8,217.0	8,250.3
Filterable Particulate Matter (Method 5)					
grams collected	0.0064	0.0033	0.0037	0.0044	0.0045
mg/dscm	3.143	1.610	1.830	2.112	2.1736
grains/acf	0.0007	0.0003	0.0004	0.0005	0.0005
grains/dscf	0.0014	0.0007	0.0008	0.0009	0.0010
lb/hr	1.380	0.720	0.796	0.953	0.962
lb/mmBtu (Calculated Fd Factor)	0.0023	0.0012	0.0014	0.0016	0.0016
Condensable Particulate Matter (Method 202)					
grams collected	0.0316	0.0271	0.0294	0.0261	0.0286
grains/acf	0.0033	0.0028	0.0030	0.0027	0.0030
grains/dscf	0.0068	0.0058	0.0064	0.0055	0.0061
lb/hr	6.813	5.916	6.327	5.650	6.177
lb/mmBtu (Calculated Fd Factor)	0.0115	0.0098	0.0109	0.0094	0.0104
Sulfate Analysis (Anion Scan)					
grams collected	0.0250	0.0200	0.0180	0.0220	0.0213
grains/acf	0.0026	0.0021	0.0019	0.0023	0.0022
grains/dscf	0.0054	0.0043	0.0039	0.0046	0.0046
lb/hr	5.390	4.366	3.874	4.770	4.600
lb/mmBtu (Calculated Fd Factor)	0.0091	0.0073	0.0067	0.0079	0.0078
Sulfuric Acid Analysis (Method 8A)					
lb/hr	0.264	0.272	0.266	0.265	0.267
lb/mmBtu (Calculated Fd Factor)	0.0004	0.0005	0.0005	0.0004	0.0005
Total Particulate Matter (Methods 5/202/8A)					
lb/hr	3.067	2.542	3.515	2.098	2.806
lb/mmBtu (Calculated Fd Factor)	0.0051	0.0042	0.0061	0.0035	0.0047

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: **Boiler 36 Stack**
 Test Method: 5/202/8A

Source Condition	Normal	Normal	Normal	Normal	
Date	11/2/16	11/3/16	11/3/16	11/3/16	
Start Time	12:30	8:15	10:20	12:20	
End Time	14:07	9:53	11:57	13:57	
	Run 1	Run 2	Run 3	Run 4	Average
Stack Conditions					
Average Gas Temperature, °F	456.9	456.5	456.2	454.3	456.0
Flue Gas Moisture, percent by volume	14.3%	11.9%	14.5%	12.1%	13.2%
Average Flue Pressure, in. Hg	29.21	29.21	29.21	29.21	29.21
Gas Sample Volume, dscf	75.112	76.099	74.898	75.988	75.524
Average Gas Velocity, ft/sec	84.150	83.955	84.175	83.685	83.991
Gas Volumetric Flow Rate, acfm	253,791	253,202	253,866	252,387	253,312
Gas Volumetric Flow Rate, dscfm	122,219	125,511	122,114	125,154	123,750
Gas Volumetric Flow Rate, scfm	142,681	142,414	142,840	142,305	142,560
Average %CO ₂ by volume, dry basis	8.0	8.2	8.1	7.9	8.1
Average %O ₂ by volume, dry basis	6.8	6.9	6.8	6.8	6.8
Isokinetic Variance	103.4	102.0	103.1	102.1	102.7
Calculated Fuel Factor Fd, dscf/mmBtu	8,227.0	8,266.0	8,246.0	8,243.0	8,245.5
Filterable Particulate Matter (Method 5)					
grams collected	0.0052	0.0049	0.0022	0.0058	0.0045
mg/dscm	2.445	2.274	1.037	2.695	2.1129
grains/acf	0.0005	0.0005	0.0002	0.0006	0.0005
grains/dscf	0.0011	0.0010	0.0005	0.0012	0.0010
lb/hr	1.119	1.069	0.474	1.263	0.981
lb/mmBtu (Calculated Fd Factor)	0.0019	0.0018	0.0008	0.0021	0.0017
Condensable Particulate Matter (Method 202)					
grams collected	0.0539	0.0575	0.0570	0.0524	0.0552
grains/acf	0.0053	0.0058	0.0056	0.0053	0.0055
grains/dscf	0.0111	0.0117	0.0117	0.0106	0.0113
lb/hr	11.599	12.543	12.291	11.410	11.961
lb/mmBtu (Calculated Fd Factor)	0.0193	0.0206	0.0205	0.0186	0.0198
Sulfate Analysis (Anion Scan)					
grams collected	0.0380	0.0410	0.0410	0.0370	0.0393
grains/acf	0.0038	0.0041	0.0041	0.0037	0.0039
grains/dscf	0.0078	0.0083	0.0084	0.0075	0.0080
lb/hr	8.178	8.943	8.841	8.060	8.506
lb/mmBtu (Calculated Fd Factor)	0.0136	0.0147	0.0147	0.0131	0.0140
Sulfuric Acid Analysis (Method 8A)					
lb/hr	0.270	0.404	0.266	0.276	0.304
lb/mmBtu (Calculated Fd Factor)	0.0004	0.0007	0.0004	0.0004	0.0005
Total Particulate Matter (Methods 5/202/8A)					
lb/hr	4.810	5.073	4.190	4.889	4.741
lb/mmBtu (Calculated Fd Factor)	0.0080	0.0084	0.0070	0.0080	0.0079

EXHIBIT 12

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Indianapolis

OFFICE MEMORANDUM

To: Rick Massoels Date: March 23, 2018
From: Jarrod C. Fisher JCF Thru: Dave Cline DA
Subject: BP Products North America, Inc. -- Whiting Business Unit
Source ID: 089-00453 Permit Number: T089-38381-00453
City: Whiting County: Lake
Protocol Reviewer: JCF Field Observer: HDV
Test Company: Mostardi Platt

The Compliance Data Section has reviewed this report and found the sampling procedures used and results obtained to be acceptable to this office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test results.

Unit Tested: No. 3 Stanolind Power Station (SPS) - Unit ID 503 - #32 Boiler
Dates of tests: October 10, 2017 215557
Test Purpose: Retest
Type of Fuel: Refinery Fuel Gas
Pollution Control Equipment: None (SCR downstream of sample location)
APCD Parameters During Tests: NA

Pollutant: PM, PM10, Opacity
Test methods: 1-4, 5, 9, 202

Maximum Operating Rate: 575 MMBtu/hr
Average Operating Rate During Test: 506.4 MMBtu/hr

PM Emission Limit: 0.03 gr/dscf (326 IAC 6.8-1-2)
PM Emission Rate: 0.0017 gr/dscf

PM Emission Limit: 0.012 lb/MMBtu (326 IAC 2-2)
PM Emission Rate: 0.003 lb/MMbtu

PM10 Emission Limits: 0.0075 lb/MMBtu, 4.28 lb/hr (326 IAC 6.8-2-6)
0.010 lb/MMBtu (326 IAC 2-2)

PM10 Emission Rate: 0.0047 lb/MMBtu, 3.23 lb/hr

Opacity Limit: 20% (326 IAC 5)
Average Opacity: 0.0%
Highest 6-minute average: 0.0%

Status: In Compliance

cc: Jarrod Fisher-Office of Air Quality



Compliance Emissions Test Report

BP Products North America, Inc.
Whiting Refinery
Boiler 32 Stack
Whiting, Indiana
October 10, 2017

Received
State of Indiana

NOV 27 2017
11-22
Dept of Environmental Management
State of Indiana

Report Submittal Date
November 3, 2017

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Mostardi Platt

Project No. M174104

888 Industrial Drive
Elmhurst, Illinois 60126
630-993-2100

3.0 TEST RESULT SUMMARIES

Client: BP Products North America
 Facility: Whiting Refinery
 Test Location: **Boiler 32**
 Test Method: 5/202

	Source Condition	Normal	Normal	Normal
	Date	10/10/17	10/10/17	10/10/17
	Start Time	9:05	10:58	12:50
	End Time	10:32	12:22	14:12
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	179.3	176.4	176.5	177.4
Flue Gas Moisture, percent by volume	13.3%	15.0%	15.3%	14.5%
Average Flue Pressure, in. Hg	28.21	28.21	28.21	28.21
Gas Sample Volume, dscf	88.007	74.147	73.365	78.506
Average Gas Velocity, ft/sec	47.570	52.722	53.859	51.384
Gas Volumetric Flow Rate, acfm	191,805	212,578	217,162	207,182
Gas Volumetric Flow Rate, dscfm	129,504	141,395	143,928	138,276
Gas Volumetric Flow Rate, scfm	149,367	166,292	169,865	161,841
Average %CO ₂ by volume, dry basis	7.5	7.5	7.6	7.5
Average %O ₂ by volume, dry basis	7.0	7.1	6.9	7.0
Isokinetic Variance	102.3	105.3	102.4	103.3
Calculated Fuel Factor Fd, dscf/mmBtu	8,114.0	8,109.0	8,105.0	8,109.3
Filterable Particulate Matter (Method 5)				
grams collected	0.01109	0.00612	0.00954	0.00892
mg/dscm	4.450	2.915	4.592	3.9857
grains/acf	0.0013	0.0008	0.0013	0.0011
grains/dscf	0.0019	0.0013	0.0020	0.0017
lb/hr	2.158	1.544	2.475	2.059
lb/mmBtu (Calculated Fd Factor)	0.0034	0.0022	0.0035	0.0030
Condensable Particulate Matter (Method 202)				
grams collected	0.00344	0.00680	0.00427	0.00484
grains/acf	0.0004	0.0009	0.0006	0.0006
grains/dscf	0.0006	0.0014	0.0009	0.0010
lb/hr	0.669	1.715	1.108	1.164
lb/mmBtu (Calculated Fd Factor)	0.0011	0.0025	0.0016	0.0017
Total Particulate Matter (5/202)				
grams collected	0.01453	0.01292	0.01381	0.01375
grains/acf	0.0017	0.0017	0.0019	0.0018
grains/dscf	0.0025	0.0027	0.0029	0.0027
lb/hr	2.827	3.259	3.583	3.223
lb/mmBtu (Calculated Fd Factor)	0.0045	0.0047	0.0051	0.0048

EXHIBIT 13

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

OFFICE MEMORANDUM

To: Rick Massoels
From: Doug Van Demark

Date: July 25, 2016
Through: Dave Cline *DAC*

Subject: BP Products North America, Inc.
Source ID: 89 00453
City: Whiting
Protocol Reviewer: KP
Test Company: ARI Environmental, Inc.

Permit #: 30396
County: Lake
Observer: KP

The Compliance Data Section has reviewed this report and found the sampling procedures used and results obtained to be acceptable to this office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test.

Date of Test: October 21, 2015
Unit Tested: No. 3 Stanolind Power Station (3SPS) Boiler #36 - 190631
Test Purpose: Compliance
Type of Fuel: Refinery Gas
Air Pollution Control Device (APCD): SCR exhausting to Stack 503-05
APCD Permitted Parameters: N/A
Maximum Operating Rate: 575.00 mmbtu/hr
Average During Test: 350.07 mmbtu/hr
Test Methods: 1-4, 5, 9 & 202

Pollutant: PM (filterable) Method 5
Permit Condition: D.24.2 326 IAC 6.8-1-2
Permitted Limits: 0.03 gr/dscf
Average Measured Emissions: 0.00028 gr/dscf
STATUS: In compliance with permitted emission limits at 61% of the permitted maximum rate.

D.24.4(b)(2) 326 IAC 2-2
0.012 lbs/mmbtu (duct burner limitation)
0.00051 lbs/mmbtu (duct burner limitation)
STATUS: In compliance with permitted emission limits at 61% of the permitted maximum rate.

Pollutant: PM10* (filterable & condensable) Method 5 & 202
D.24.1 326 IAC 6.8-2-6
Permitted Limits: 0.0075 lbs/mmbtu
4.28 lbs/hr
0.0133 lbs/mmbtu
7.84 lbs/hr
STATUS: Out of compliance with permitted emission limits at 61% of the permitted maximum rate.

Permit Condition: D.24.4(b)(3) 326 IAC 2-2

Permitted Limits: 0.01 lbs/mmbtu

Measured Emissions: Run 1 Method 5 only 0.00049 lbs/mmbtu
Run 2 Method 5 only 0.00078 lbs/mmbtu
Run 3 Method 5 only 0.00025 lbs/mmbtu
Average Method 5 only 0.00051 lbs/mmbtu

Run 1 Method 202 only 0.01206 lbs/mmbtu
Run 2 Method 202 only 0.01346 lbs/mmbtu
Run 3 Method 202 only 0.01435 lbs/mmbtu
Average Method 202 only 0.01329 lbs/mmbtu

Run 1 Method 5 & 202 0.01255 lbs/mmbtu
Run 2 Method 5 & 202 0.01424 lbs/mmbtu
Run 3 Method 5 & 202 0.01460 lbs/mmbtu
Average Method 5 & 202 0.01380 lbs/mmbtu

STATUS: Out of Compliance based on condensable PM only with permitted emission limits at 61% of the permitted maximum rate.

Pollutant	Opacity
Permit Condition:	C.1 326 IAC 5-1
Permitted Limits:	20%
Average Measured Emissions:	0%

STATUS: In compliance with permitted emission limits at 61% of the permitted maximum rate.

*Note: The PM10 Lake County SIP limit includes both filterable and condensable PM10. The condensable PM10 (M202) emissions alone were above the PM10 emission limits.

** Note: Emissions were sampled from Stack 503-02 after the addition of the duct burner emissions. Boiler #32 326 IAC 6.8-2-6 PM10 limits are independent of the duct burner emissions. By using this approach it is not possible to isolate emissions from either source in order to determine compliance with applicable limits of either source.

cc Van Demark

TEST REPORT

COMPLIANCE EMISSION TEST POWER STATION NO. 3 - BOILER 36 STACK

BP PRODUCTS NORTH AMERICA, INC.
WHITING, INDIANA

PREPARED FOR:

BP PRODUCTS NORTH AMERICA, INC.

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Steve Flaherty
Senior Project Manager
Source Testing Division

ARI Project No. 566-179
ARI Proposal No. 36415
BP Purchase Order No. 3000463136
Test Date: October 21, 2015
Report Issuance Date: November 16, 2015

**SECTION FOUR****Test Results****TABLE 4-1. POWER STATION NO. 3 - BOILER 36 STACK PM TEST RESULTS**

TEST RUN NO. :	1	2	3	
TEST DATE :	10/21/2015	10/21/2015	10/21/2015	
TEST TIME :	09:55 - 11:38	12:25 - 14:05	14:45 - 16:23	Average
Process Data				
Boiler steam load, 1,000 lb/hr	351.8	349.2	349.2	350.1
Stack Gas Parameters				
Temperature, av. °F	364.2	364.2	364.4	364.3
Velocity, av. ft/sec	72.848	72.684	72.289	72.607
Volume flow, acfm	219,704	219,211	218,019	218,978
Volume flow, scfm	138,341	138,013	137,257	137,870
Volume flow, dscfm	119,186	118,317	117,544	118,349
Volume flow, scfh	8,300,463	8,280,796	8,235,427	8,272,228
Volume flow, dscfh	7,151,142	7,099,019	7,052,646	7,100,936
Moisture, av. % vol	13.85	14.27	14.36	14.16
CO ₂ , av. % vol, db	8.3	8.3	8.3	8.3
O ₂ , av. % vol, db	6.9	7.1	7.1	7.0
Sample Train Data				
Time, min	90.0	90.0	90.0	
Volume, dscf	58.106	58.049	58.659	
Volume, dscm	1.646	1.644	1.661	
Isokinetic ratio, %	98.6	99.2	101.0	
Particulate Matter				
Filterable PM collected, mg	1.00	1.65	0.55	1.07
Concentration				
gr/dscf	0.0003	0.0004	0.0001	0.0003
lb/dscf x 10 ⁻⁶	0.0379	0.0627	0.0207	0.0404
Emission rate				
lb/hr	0.271	0.445	0.146	0.287
Condensable PM collected, mg	24.51	28.35	30.99	27.95
Concentration				
gr/dscf	0.0065	0.0075	0.0082	0.0074
lb/dscf x 10 ⁻⁶	0.9301	1.0768	1.1648	1.0572
Emission rate				
lb/hr	6.649	7.642	8.212	7.501
Total PM collected, mg	25.51	30.00	31.54	29.02
Concentration				
gr/dscf	0.0068	0.0080	0.0083	0.0077
lb/dscf x 10 ⁻⁶	0.9681	1.1395	1.1855	1.0977
Emission rate				
lb/hr	6.921	8.087	8.358	7.788
lb/MMBtu	0.0120	0.0143	0.0148	0.0137
Visible Emissions				
Opacity, %	0	0	0	0

EXHIBIT 14



Compliance Emissions Test Report

**BP Products North America, Inc.
Whiting Refinery
3 SPS Boiler 36 Stack
Whiting, Indiana
April 16, 2019**

**Report Submittal Date
May 9, 2019**

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Project No. M191606

Client: BP Products North America, Inc.
 Facility: Whiting Refinery
 Test Location: 3 SPS Boiler 36 Stack
 Test Method: 5/202

Source Condition	Normal	Normal	Normal	
Date	4/16/19	4/16/19	4/16/19	
Start Time	9:00	11:10	13:00	
End Time	10:15	12:25	14:15	
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	408.1	409.8	412.9	410.3
Flue Gas Moisture, percent by volume	13.8%	14.1%	14.2%	14.0%
Average Flue Pressure, in. Hg	29.09	29.09	29.09	29.09
Gas Sample Volume, dscf	46.859	45.905	46.041	46.268
Average Gas Velocity, ft/sec	84.996	83.826	83.994	84.272
Gas Volumetric Flow Rate, acfm	256,341	252,813	253,321	254,158
Gas Volumetric Flow Rate, dscfm	130,616	128,231	127,834	128,894
Gas Volumetric Flow Rate, scfm	151,583	149,203	148,967	149,918
Average %CO ₂ by volume, dry basis	7.5	7.6	7.6	7.6
Average %O ₂ by volume, dry basis	7.4	7.0	7.0	7.1
Isokinetic Variance	101.3	101.1	101.7	101.4
Calculated Fuel Factor Fd, dscf/mmBtu	8,122.0	8,124.6	8,126.4	8,124.3
Filterable Particulate Matter (Method 5)				
grams collected	0.00220	0.00205	0.00182	0.00202
grains/acf	0.0004	0.0003	0.0003	0.0003
grains/dscf	0.0007	0.0007	0.0006	0.0007
lb/hr	0.811	0.757	0.668	0.745
lb/mmBtu (Calculated Fd Factor)	0.0013	0.0012	0.0011	0.0012
Condensable Particulate Matter (Method 202)				
grams collected	0.01293	0.01631	0.02051	0.01658
grains/acf	0.0022	0.0028	0.0035	0.0028
grains/dscf	0.0043	0.0055	0.0069	0.0056
lb/hr	4.767	6.026	7.532	6.108
lb/mmBtu (Calculated Fd Factor)	0.0076	0.0096	0.0120	0.0097
Total Particulate Matter (5/202)				
grams collected	0.01513	0.01836	0.02233	0.01861
grains/acf	0.0026	0.0031	0.0038	0.0032
grains/dscf	0.0050	0.0062	0.0075	0.0062
lb/hr	5.578	6.783	8.200	6.854
lb/mmBtu (Calculated Fd Factor)	0.0089	0.0108	0.0131	0.0109